

**MASSACHUSETTS**

**AGRICULTURAL JOURNAL.**

---

---

Vol. VI.]

JANUARY, 1820.

[No. I.

---

---

AN ADDRESS DELIVERED BEFORE THE MASSACHUSETTS  
AGRICULTURAL SOCIETY, AT THE BRIGHTON CATTLE  
SHOW, OCTOBER 12th, 1819. BY HON. JOSIAH QUINCY.

THE Board of Trustees of the Massachusetts Society for Promoting Agriculture, have requested that I should address you, this day, on topics, connected with the objects of their Institution and with the occasion. In acceding to their appointment, I have yielded to considerations of official duty. For the manner, in which the task shall be executed, I need not apologize to practical and intelligent men, such as I have now the honour to address. They know well how difficult it is to cast over a trite subject the air of novelty, or to make one, that is familiar, interesting. There is also something in the every day labours of agriculture, apparently too rough for a polished discourse, too common for one that is elevated, and too inseparable from soil and its composts to be treated to the general ear, without danger of offence to that fastidiousness of fancy, which is miscalled refinement.

Amid the perils, which thus surround every public speaker upon such topics, where, on the one hand, the rough necessities of the farmer require plainness and particularity; and where, on the other, the over-scrupulousness of the imagination requires that important subjects of agri-

culture should be generalized, and intimated rather than uttered, I shall deem myself sufficiently fortunate, if it shall be my lot to escape, without failing in fidelity to the interest of the country, and yet without violating the dainty ear of city sensibility.

Our purpose, then, this day is to seek what is true and what is useful in relation to the interests of our agriculture.

In executing this purpose, I shall address myself chiefly to that great body of our countrymen, who are emphatically called—farmers. By which, I mean, the great body of Massachusetts yeomanry ; men, who stand upon the soil and are identified with it ; for there rest their own hopes, and there the hopes of their children. Men, who have, for the most part, great farms, and small pecuniary resources ; men, who are esteemed more for their land, than for their money ; more for their good sense than for their land ; and more for their virtue than for either ; men, who are the chief strength, support, and column of our political society, and who stand to the other orders of the state, in the same relation, which the shaft bears to the pillar ; in respect of whom, all other arts, trades, and professions, are but ornamental work ; the cornice, the frieze, and the Corinthian capital.

I am thus distinct, in declaring my sentiment concerning the importance and value of this class of men, from no purpose of temporary excitement, or of personal conciliation, but because I think it just and their due, and because, being about to hint concerning errors and defects in our agriculture, I am anxious that such a course of remark should not be attributed to any want of honour, or respect, for the farming interest. On the contrary, it is only from a deep sense of the importance of an art, that a strong desire for its improvement can proceed. Whatever tends to stimulate and direct the industry of our farmers ; whatever spreads prosperity over our fields ; whatever carries happiness to the home, and content to the bosoms of our



yeomanry, tends, more than every thing else, to lay the foundations of our republic deep and strong, and to give the assurance of immortality to our liberties.

The errors and deficiencies of our practical agriculture may be referred, in a general survey, with sufficient accuracy to two sources ; the want of scope of view among our farmers, and the want of system in their plans.

Concerning another want, of which farmers are most sensible and most generally complain, the want of cash in their pockets, I shall say nothing, because it is not a want peculiar to the farmer. It is a general want, and belongs to all other classes and professions. Besides, there is no encouragement to speak of this want, because it is one that increases, by its very supply. All of us must have observed that it almost ever happens, with, however, a few splendid exceptions, that the more any man has of this article, the more he always wants.

The errors and deficiencies, to which I shall allude, will not be such as require any extent of capital to rectify. All that will be requisite is a little more of that industry, of which our farmers have already so much ; or that industry a little differently directed. It is not by great and splendid particular improvements, that the interests of agriculture are best subserved, but by a general and gradual amelioration. Most is done for agriculture, when every farmer is excited to small attentions and incidental improvements. Such as proceed, for instance, from the constant application of a few plain and common principles. Such are—that, in farming, nothing should be lost, and nothing should be neglected ; that every thing should be done in its proper time ; every thing put in its proper place ; every thing executed by its proper instrument. These attentions, when viewed in their individual effect, seem small, but they are immense in the aggregate. When they become general, taken in connexion with the dispositions which precede, and the consequences which inevitably

follow such a state of improvement, they include, in fact, every thing.

Scope of view, in a general sense, has relation to the wise adaptation of means to their final ends. When applied to a farmer, it implies the adaptation of all the buildings and parts of a farm to their appropriate purposes, so that whatever is fixed and permanent in its character, may be so arranged as best to facilitate the labour of the farm, and best to subserve the comfort, convenience, and success of the proprietor.

Our ideas, upon this subject, may be best collected from inspection. If our fellow farmers please, we will, therefore, in imagination, adjourn, for a few moments, and take our stand, first, at the door of the farm house. I say "at the door." Far be it from me to enter within it. Far be it from me to criticise the department of the other sex, or to suggest that any thing, peculiarly subject to their management, can be either ameliorated, or amended. Nor is it necessary, for I believe it is a fact almost universally true, that where the good man of the family is extremely precise and regular, and orderly in his arrangements without doors, he never fails to be seconded, and even surpassed, by the order, the regularity, and neatness of the good woman within.

Let us cast our eyes, then, about us, from the door of the farm house. What do we see? Are the fences on the road in good condition? Is the gate whole, and on its hinges? Are the domestic animals excluded from immediate connexion with the dwelling house, or at least from the front yard? Is there a green plot adjoining, well protected from pigs and poultry, so that the excellent housewife may advantageously spread and bleach the linen and yarn of the family? Is the wood pile well located, so as not to interfere with the passenger; or is it located with especial eye to the benefit of the neighbouring surgeon? Is it covered, so that its work may be done in stormy weather? Is the



well convenient; and is it sheltered, so that the females of the family may obtain water without exposure, at all times and at all seasons? Do the subsidiary arrangements indicate such contrivance and management as that nothing useful should be lost, and nothing useless offend? To this end, are there drains, determining what is liquid in filth and offal to the barn yard, or the pens? Are there receptacles for what is solid, so that bones and broken utensils may occasionally be carried away and buried? If all this be done, it is well; and if, in addition to this, a general air of order and care be observable, little more is to be desired. The first proper object of a farmer's attention, his own and his family's comfort and accommodation is attained. Every thing about him indicates that self-respect, which lies at the foundation of good husbandry, as well as of good morals. But if any of us, on our return home, should find our door barricadoed by a mingled mass of chip and dirt; if the pathway to it be an inlaid pavement of bones and broken bottles, the relics of departed earthen ware, or the fragments of abandoned domestic utensils; if the deposit of the sink settle and stagnate under the windows, and it is neither determined to the barn yard, nor has any thing provided to absorb its riches, and to neutralize its effluvia; if the nettle, the thistle, the milkweed, the elder berry, the barberry bush, the Roman wormwood, the burdock, the dock and the devil's apple, contend for mastery along the fences, or flower up in every corner; if the domestic animals have fair play round the mansion; and the poultry are roosting on the window stools, the geese strutting centry at the front door, and the pig playing puppy in the entry; the proprietor of such an abode may call himself a farmer, but practically speaking, he is ignorant of the A B C of his art. For the first letters of a farmer's alphabet are, neatness, comfort, order.

As we proceed to the farm, we will stop one moment at the barn yard. We shall say nothing concerning the

arrangements of the barn. They must include comfort, convenience, protection for his stock, his hay, and his fodder; or they are little or nothing. We go thither for the purpose only of looking at what the learned call the stercorary, but which farmers know by the name of the manure heap. Will our friends from the city pardon us, if we detain them a moment at this point? Here we stop the rather, because here, more than any where else, the farmers of Massachusetts are careless and deficient; because on this, more than on any thing else, depends the wealth of the farmer; and because this is the best criterion of his present, and the surest pledge, of his future, success. What then is its state? How is it located? Sometimes we see the barn yard on the top of a hill, with two, or three fine rocks in the centre; so that whatever is carried or left there, is sure of being chiefly exhaled by the sun, or washed away by the rain. Sometimes it is to be seen in the hollow of some valley, into which all the hills and neighbouring buildings, precipitate their waters. Of consequence all its contents are drowned, or water-soaked, or, what is worse, there having been no care about the bottom of the receptacle, its wealth goes off in the under *strata*, to enrich, possibly, the antipodes. The Chinese, for aught we know, may be the better for it, but it is lost forever to these upper regions.

Now all this is to the last degree wasteful, absurd, and impoverishing. Too much cannot be said to expose the loss and injury, which the farmer thus sustains. Let the farmer want whatever else he pleases. But let no man call himself a farmer, who suffers himself to want a receptacle for his manure, water-tight at the bottom and covered at the top, so that below, nothing shall be lost by drainage, and above, nothing shall be carried away by evaporation. Let every farmer, wanting such protection for his manure, be assured that he loses, by the sun and rain, tenfold as much as will pay all his taxes, state, town, and national,



every year. Let not the size of his manure heap be any objection. If it be great, he loses the more, and can afford the expense the better. If it be small, this is the best way to make it become greater. Besides, what is the expense? What is wanted? An excavation, two or three feet deep, well clayed, paved, and "dishing," as it is called, of an area from six to thirty feet square, according to the quantity of manure; over head a roof made of rough boards and refuse lumber, if he pleases. The object being to shut out the action of the sun and cast off the rain, so that no more should come upon his manure heap than the farmer chooses. This he regulates by spouts at his discretion.

Time will not permit us to stay long upon the farm; we will go out upon it, only for the purpose of making a single observation, and that in relation to the fences.

It is thought to be a great virtue in a farmer to build good fences. And so it is. None can be greater, so far as relates to external fences; those which bound on the road, or a neighbour. They ought to be perfect and sufficient against every intrusion. But when the remark is applied to interior fences, it is often far otherwise. The making and keeping in repair unnecessary fences is one of the greatest drawbacks from the profitable employment of the labour of our farmers. Every year new fencing stuff must be bought, or stone walls must be built and stone walls repaired. Much of that time and capital are expended about these objects, which ought to be employed in collecting manures, in ploughing their land, or in some labour directly conducing to the prosperity of the immediate, or ensuing crop.

The adopting of a single principle, in relation to the management of their farms, would save at once one half of all their interior fences. I allude to the making the distinction between arable and pasture lands permanent, and adopting it as a principle, that no beasts should be permit-

ted to range upon the soil destined to the plough and the scythe.

I know that this proposition will be received by many with surprise, and by some with a sneer. But consider of it farmers. Be assured that the practice of grazing your mowing lands is the falsest of all that bears the name of economy. It is impossible, in a discourse so general as this necessarily is, to give all the grounds of this position. I look at the subject now, only in relation to saving the expense of making fences and repairing them. Let any farmer of middle age take his pencil and calculate what it has cost him, and his ancestors, in the course of his and their lives, to make and maintain rail fences, or stone walls, upon their farms. I am mistaken if one half of the farmers do not find the expense far exceed their present conception, and if the other half do not find, that, at a fair estimate of materials, labour, and interest, the cost of these fences or walls has been more than the whole farm would now sell for under the hammer.

Now more than half of all the stone walls and rail fences in Massachusetts are interior fences, dividing lands belonging to the same proprietor. These interior fences are absolutely useless, except for the purpose of enabling the proprietor to pasture his mowing land. They are worse than useless on exclusively arable land. These walls are in fact harbours for all sort of vermin ; for field mice, and woodchucks and skunks and squirrels. Then, on both sides, what a rare assemblage always of elderberries and barberry bushes, and nettles, and all sorts of injurious weeds ! Thus not only much land is lost, but worse than lost. There is done a positive injury. Besides, when the plough begins to run, what then ? Why, upon many farms, you cannot run a plough forty rods in a straight line, without coming, as farmers say, "plump" upon a stone wall. Then what a "hawing and jeeing !" And the good-natured fellow, at the front yoke, must always take time to



crack his joke, or to have "a cup of comfort," with the good natured fellow at the plough tail. And all this at the direct and positive loss of the owner of the land, or the employer!

But our lands are full of stone, what shall we do with them? Certainly there is no absolute necessity of building them up in the shape of a stone wall. If there be, then thicken, or heighten, your external walls. But this is done already. Well, then, have you never a pondhole to fill up? Is there no useless hollow, into which they may be thrown? If nothing of this kind can be done with them, better pile them up pyramidically, and cover them with grape vines, than go to the expense of building walls, worse than useless.

Let me not be understood to intend, that good farming requires that farmers should level, or remove the walls, or fences, which they, or their ancestors' labour have already provided. The condition of every man's farm is in this respect, a particular fact, by which the calculations of his business should be made, and his conduct, in relation to it, governed. The only object of these remarks is to invite farmers, who are contemplating building new walls, or purchasing new materials for interior fences, to consider, whether their own and oxen's labour may not be better employed; and whether grazing the land, intended to be fenced, be in fact a compensation for the great expenditure, they are about to incur, of the only capital, they have, generally, at their command.

Farmers should never, one moment forget that their and their oxen's labour constitute their capital, and that they should be wasted in no object, which does not add something to the present, or future, years, actual product. It is not too much to say that the capital expended in rail fences and stone walls, which are useless in Massachusetts, would, if it had been applied in collecting manures and in deepening the soil, have added, at this day, a third part to the income of every farmer in the country.

Let every farmer divide his pasture ground as he pleases. Let the fence between his arable and pasture land, be as strong as an external fence. But, if possible, let all his arable ground, though it be a hundred acres, be in one lot. Then his plough runs clear, in a long furrow. His tillage is divided only by the different species of grain and vegetables, he cultivates. There are no fences ; of consequence no inconvenient and worthless headlands ; no apology for thistles and nettles. The scene is beautiful to the eye. The whole has the appearance of a garden ; and begets in the farmer a sort of horticultural neatness.

Before passing to treat, very briefly, the remaining topic of discourse, may I be permitted to say a word on the style of our buildings ? It will be worth the time, if it make only one man, about to build, consider.

The fault is not peculiar to farmers, it is true of men, in almost every rank and condition of life, that, when about to build, they often exceed their means, and almost always, go beyond the real wants of their families, and the actual requisition of their other relations, in life. But let not the sound, practical, good sense of the country be misled, by the false taste and false pride of the city ; where wealth, fermenting by reason of the greatness of its heaps, is ever fuming away in palaces ; the objects of present transitory pride ; and too often, of future, long continued, repentance.

Now, what do we sometimes see, in the country ? Why a thriving farmer, touched with this false taste, will throw up a building thirty, or forty, feet square, two, or two and a half, stories high, four rooms on a floor, with an immeasurable length of out building behind. And what is the consequence of all this greatness ? Why often, for years, the house will not be wholly glazed : or, if glazed, not clapboarded ; or, if clapboarded, not finished ; the destined portico is never put up ; the destined front step is never put down ; and the ragged clapboards, on each side of the front door, there they stand, year in and year out, staring and



gaping at each other, with a look of utter despair of ever being united. And if you go into these mansions, what do you see? Why, you will often find, that while the good man of the house and his consort are snugly provided with warm, well plaistered rooms, the children and all the rest of the family sleep about in unfinished chambers; subject to every sort of exposure; and "the best room," as it is called, in the original plan of the mansion, there it stands, the lumber room of the family, for half a century; the select and eternal abode of crickets and cockroaches; and all sorts of creeping and skipping things; full of old iron and old leather; the stuffing of decayed saddles; the ragged relics of torn bed quilts; and the orts and ends of twenty generations of corn cobs.

When will man learn, that his true dignity, as well as happiness, consists in proportion! In the proportion of means to ends; of purposes to means; of conduct to the condition of life, in which a kind Providence has placed him; and to the relations of things concerning which, it has destined, he should act!

The pride of the farmer should be out, in his fields. In their beauty, in their order, in their product, he should place the gratification of his humble and honourable ambition. The farmer's great want is capital. Never should his dwelling be splendid at the expense of his farm. In this, all that is surplus, in his capital, should concentrate. Whatever is uselessly expended elsewhere, is so much lost to his family and his fortune.

I shall now recur, briefly, to another class of deficiencies, the want of system in the plans of our farmers.

System relates to time, to courses and to modes of husbandry. A full elucidation of each topic would embrace the whole circle of farming dispositions and duties. The time will not permit any thing more than a recurrence to one, or two, leading ideas. Want of system, in agriculture, leads to loss of time and increase of expense. System, has chief reference to succession of crops; to sufficiency of hands;

and to selections of instruments. As to the succession of crops, called rotation, almost the only plan of our farmers is to get their lands, into grass as soon as possible; and then to keep them, in grass, as long as possible. The consequence of this practice, for it deserves not the name of a system, is to lead to the disuse, or rather to the least possible use, of that great source of agricultural riches—the plough. Accordingly, it has almost become a maxim, that the plough is the most expensive of all instruments; and of consequence as much as possible to be avoided. And so it is, and so it must be, as the business of our farms is managed. By keeping lands down to grass, as long as possible, that is as long as the hay product will pay for mowing and making; the consequence is that our lands, when we are obliged reluctantly, to put the plough into them, are bound and matted, and cross-barred, with an impervious, inextricable, infrangible web of root and sod. Hence results a grand process, called “a breaking up,” with four, five, or six head of cattle, as the case may be, with three men, one at the oxhead, a second at the plough-beam, and the third at the plough-handle. Is there any wonder that such a ploughing apparatus is an object of aversion?

It is impossible for any man to witness “a breaking up” of this kind, without being forcibly reminded of the reflection made by a dry Dutch commentator, on that passage in the book of Kings, where it is said, that Elisha was found “ploughing with twelve yoke of oxen.” “Well,” said the commentator, “it is no wonder, that Elisha was glad enough to quit ploughing, for prophecying, if he could not break up with less than twelve yoke of oxen.”

In fact, the plough is the natural instrument of the farmer's prosperity, and the system of every farmer ought to have reference to facilitating and increasing its use. Let a rotation, be adopted, embracing two or three years successive ploughings, for deepening and pulverizing crops, to be succeeded by grain and grass, for two or three years more. The plough, on its return, every five, six, or seven years,



finds, in such case, the land mellow, soft, unimplicated by root, and tender in sod. The consequence is, that "a breaking up" is then done with one yoke of oxen and one man. The expense is comparatively small. There is nothing to deter, and every thing to invite, the farmer to increase the use of that most invaluable of all instruments. It ought to be a principle that our farming should be so systematized that all "breaking up" should be done with one yoke of oxen and one man; who both drives and directs the plough.

Systematic agriculture also requires, sufficiency of hands. Whatever scale of farming any man undertakes to fill, hands enough to do it well are essential. Although this is a plain dictate of common sense, yet the want of being guided by it, in practice, is one great cause of ill success, in our agriculture. Because we hear every day, that "labour runs away with all profits in farming," almost every farmer lays it down as a maxim to do with as little labour as possible. Now this maxim almost always results in practice, in doing with less than he ought. The effect is almost every where seen in loss of time; loss of season; loss of the employ of working cattle, and loss, or deterioration, of crop. Now, in truth, labour, as such, never yet diminished any man's profit, on the contrary, it is the root and spring of all profit. Labour, unwisely directed and unskilfully managed, is, indeed, a great consumer of the farmer's prosperity. But labour wisely directed and skilfully managed, can, from the nature of things, result in nothing else than profit. What is skilful management and what is wise direction of labour opens a field almost boundless; and not to be attempted on the present occasion. A single remark must suffice. The great secret of European success, in agriculture, is stated to be, "much labour on, comparatively, little land." Now the whole tenor of Massachusetts husbandry, from the first settlement of the country, has been little labour, on much land. Is it wonderful then, that success should be little, or nothing, when conduct is in direct violation of the principle, on which success depends?

With respect to utensils too, system requires that they should be the most perfect of their kind; and always the most perfect in their state.

\* Great profits in agriculture can result only from great improvements of the soil. Great improvements of the soil can result only from unremitting industry. The chief study of every farmer *should be what is useful, and what is useless expense, in relation to his art.* The discrimination between these is the master key of the farmer's prosperity. The first should be incurred with a freedom, little short of profusion. The last should be shunned, as the sailor shuns the rocks, where are seen the wreck of the hopes of preceding mariners.

In this art, and almost, in this art alone, "it is the liberal hand, which maketh rich."

Liberality, in providing utensils, is the saving both of time and of labour. The more perfect his instruments, the more profitable are they.

So also is it with his working cattle and his stock. The most perfect in their kinds are ever the most profitable.

Liberality, in good barns and warm shelters, is the source of health, strength and comfort to animals; causes them to thrive on less food and secures from damage all sorts of crops.

Liberality also, in the provision of food for domestic animals is the source of flesh, muscle, and manure.

Liberality to the earth, in seed, culture and compost, is the source of its bounty.

\* I am indebted, partly, for the general turn of thought, and for some of the expressions, in a few of the ensuing paragraphs, to a work entitled *Arator*, by John Taylor, Esq. of Caroline county, Virginia;—a work principally destined to ameliorate the agriculture of the State, of which the author is a citizen, but written, so far as it relates to its agricultural tendency, in an admirable spirit, and abounding in reflections at once practical and philosophical.



Thus it is, in agriculture, as in every part of creation, a wise and paternal Providence has inseparably connected our duty and our happiness.

In cultivating the earth, the condition of man's success is, his industry upon it.

In raising domestic animals, the condition of his success is, kindness and benevolence to them.

In making the productiveness of the earth depend upon the diligence and wisdom of the cultivator, the Universal Father has inseparably connected the fertility of his creation with the strongest intellectual inducements, and the highest moral motives.

In putting the brutal world under his dominion, he has placed the happiness of which their nature is susceptible, under the strong guarantee of man's interest.

Instead, therefore, of repining at his lot, let the cultivator of the ground consider his, as among the highest and happiest of all human destinies, since in relation to the earth, he is the instrument of Heaven's bounty; and in relation to the inferior orders of creation, the almoner of providence.

---

TRUSTEES' ACCOUNT OF THE CATTLE SHOW, AND EXHIBITION OF MANUFACTURES, ON THE 12TH AND 13TH OF OCTOBER, 1819, AT BRIGHTON.

THE Trustees of the Massachusetts Agricultural Society having assembled at their hall, in Brighton, on Tuesday the 12th of October, conformably to notice, they proceeded to the Meeting-house, accompanied by a great concourse of Members of the Society, and of their fellow citizens, and of distinguished strangers, whom the interesting occasion had collected.

Prayer having been made by the Rev. Mr. Foster, the rules and regulations having been read by the president,

and an address delivered by one of the Trustees, the various Committees proceeded to execute the tasks prescribed to them.

These Committees had been previously selected and arranged, and were constituted in the following manner:

**COMMITTEE ON ALL STOCK EXCEPT WORKING OXEN.**

**Hon. John Lowell, *Chairman.***

**Isaac M'Lellan,**

**Joseph Harrington,**

**Willard Gay, and**

**Abijah White, Esqrs.**

**ON WORKING OXEN.**

**Hon. John Welles, *Chairman.***

**Gen. S. G. Derby, and**

**Col. Baldwin.**

**\* ON AGRICULTURAL EXPERIMENTS.**

**Thos. L. Winthrop, *Chairman.***

**Gorham Parsons, and**

**E. H. Derby, Esqrs.**

**ON INVENTIONS.**

**Hon. Josiah Quincy, *Chairman.***

**T. W. Sumner, Esq. and**

**Mr. Paul Moody.**

**ON MANUFACTURES.**

**Hon. Richard Sullivan, *Chairman.***

**Abbott Lawrence, and**

**John Lemist, Esqrs.**

**\* This Committee at the present time only receive notice for the claim of Premium. The evidences according to the rule prescribed in the list of Premiums, may at any time previous to the first of December, be delivered to either of the above Committee.**



## ON THE PLOUGHING MATCH.

S. W. Pomeroy, Esq. *Chairman.*

Joseph Curtis, and

Benjamin Goddard, Esqrs.

## MARSHALS.

Major Samuel Jaques,

Col. Luther Gay,

Col. D. S. Greenough,

Capt. A. H. Gibbs.

Jonathan Winship, Esq. *Clerk.*M. D. Worcester, *Assistant Clerk.*G. G. Channing, Esq. *Auctioneer.*REPORT OF THE COMMITTEE, ON ALL STOCK, EXCEPT  
WORKING OXEN.

THE committee appointed to award premiums upon every species of live stock, beg leave to report, that in the execution of their duties, they have necessarily experienced great embarrassment, resulting not only from the common difficulties which occur in deciding on cases where the shades of difference are scarcely perceptible, but from the unexampled increase of the number of competitors in this part of the exhibition.— These have increased from about thirty-seven to eighty. In many cases there were six or eight competitors for one premium, and as our fellow citizens have learned already, a lesson, well worth all the expense and trouble of these pub-

lic shows, that no animal, who has not some very considerable pretensions, can stand any chance of success, the difficulty has annually increased of selecting those, among many excellent ones, which should be deemed deserving of the premiums of the Society.

It may be useful to remark that the character of the exhibition in this branch of live stock, has every year improved, and the qualities of the animals offered have been regularly more valuable; but to transient observers, this may not seem to have been the case. The trustees have in past years rather discouraged the idea, that their premiums would *hereafter* be awarded to animals of a *monstrous size*—that they should look rather to productive and profitable qualities.

Hence those persons who visited the show with the expectation of seeing something out of nature, (the objects which attract the attention of a multitude, without reflecting that their cost may have been double their ultimate value) may have been disappointed. It is to the *younger* animals chiefly, that the eye of the *judicious* observer would look to ascertain the actual improvement and the solid benefits of this recent exhibition.—We have no hesitation in declaring unanimously, that in *this* respect, the show of the present year has far exceeded that of any former one, thereby affording most complete proof, that an increased interest and attention had been produced by the exhibition.

If any thing further could be necessary to satisfy the public of this fact, we might add, that the finest specimens of young animals were in almost every case the progeny of those to whom the Society and public suffrage had awarded the premiums on former years.

Thus to instance a few examples—The progeny of the excellent imported bull, Fill Pail, generously given to the Society by the Hon. Mr. Thorndike (though raised in different parts of the country) were in *every* case distinguish-



ed by their resemblance to the sire, and their beautiful proportions, and they afford a reasonable hope (of the soundness of which time only can decide) that they will prove an important accession, and work a rapid improvement in our stock of cattle destined for the dairy.

The same remark may be made with still more force as to the progeny of Mr. Williams's extraordinary imported Teeswater bull.

The descendants of Dr. Foster's prize cow also prove the same proposition.—It may be assumed, in short, from *three years experience*, as an established truth, that the effects which the Trustees hoped to produce by their exhibition, have been realized; which were, *first*, to call the attention of farmers to the difference between good and bad races, and individuals.—*Secondly*, to induce them to bring forward those which excel. *Thirdly*, to enhance their *market value*, thus giving to the raiser, besides his personal gratification in the prize, a substantial reward—and lastly—to preserve from the butcher, the progeny of excellent animals, that the race may be essentially ameliorated.

We say without hesitation, that all these effects were visible in the various classes of milch cows, bulls, bull calves, merino sheep and swine. We wish we were not obliged to add, that we have seen no attempt to improve the breed of our native sheep, but, on the other hand, the specimens exhibited have regularly grown worse.

With these preliminary remarks, which were thought necessary to explain the principles on which the committee proceed, as well as to shew the *real merit* of the exhibition, we proceed to announce the premiums.

For the *best bull raised* in Massachusetts, above one year old, to Mr. Jonathan Whitman, 40 dollars.

The second premium, for a bull exceeding one year, to Judge Goodale.

The bull owned by Major John Bigelow, was so excellent, that the committee hesitated whether he was not a fair candidate for the first premium, but the consideration that Mr. Whitman's bull had exhibited proofs of his excellence by the progeny produced, induced them to give the final preference to Mr. Whitman. They gave the second premium of 25 dollars to Judge Goodale's bull, because, in some points, he exhibited qualities which were exceedingly rare, and they thought he might be very useful in improving the race of our cattle in these particular respects.—The universal admiration of him, was also another ground, which induced them to notice him.

There were many very excellent bulls, which their limited authority could not permit them to introduce, such as Moses Kendal's, Eli Stearns' and Benjamin T. Reed's.

For the *Best Bull Calf*, under one year—to Stephen Williams, Esq. of Northborough, 1st premium of 15 dollars. It must be remembered that he was sired by the admirable Teeswater Bull, sent out by Charles Williams, Esq. to his brother, the claimant to whom the premium was awarded.

To Samuel S. Gardner, the 2d premium of 3 dollars; for a beautiful Bull Calf the issue of the Bull Fill Pail, imported by Col. Thorndike. There were some beautiful Bull Calves exhibited by Marquis Converse, Jabez Ellis, Joseph Lovell, Henry Newell, and Gen. S. G. Derby, the two latter by *Fill Pail*.

For the *Best Milch Cow*, not less than three years old—1st premium to Dr. Stearns, of Medford, 40 dollars—2d do. to Luke Fiske of Waltham, 30 dollars—3d do. to Oliver Lock, of Chelmsford, 20 dollars.

There were many other excellent Cows—but the committee on the whole gave the preference to the above.

Mr. Parkman of Brighton had a very fine Cow, respecting which, he produced proof, that she had given 1760 quarts in four months, next preceding the Show.



Major Wheeler's two Cows were very fine—one of them had given 13 quarts at a single milking, and eleven pounds of butter per week.

Mr. Howe's and Mr. Fayerweather's Cows were also very fine—but considering all the circumstances of feed, age, form, duration of giving milk, and adaptation to improve the breed, they decided as above stated.

For the best Heifer from one to three years old—To Gorham Parsons, Esq. 1st premium, 15 dollars—to Dr. Luther Stearns, 2d do. 10 dollars.

The most distinguished after these were Edwin Fiske's and John Fayerweather's.

For the *Best Ox*, fitted for slaughter—to Luke Fiske, 1st premium 50 dollars.

This Ox weighed alive 2798 pounds, being by a few pounds the heaviest Ox ever offered at this exhibition.

To John Fayerweather, 2d do. 40 dollars—to Lewis Lilly, 3d do. 30 dollars.

There were no Merino Wethers offered for premium. This would look as if Merinos were unreasonably getting into disfavour.—We should never forget the success of the Saxons, who have surpassed all Europe in the qualities of their Merino Wool.

The *Native Wethers* offered were below all consideration, and we repeat, that unless the animals offered be of remarkable worth, we give no premiums.

For the *Best Boar*, not exceeding two years old—1st premium to Francis White of Watertown, 10 dollars.

It should be known that this was an imported Boar, and the most perfect animal in his form ever seen in our country. What he will prove on trial, or what effect he may produce in a cross with our native Pigs, is yet to be ascertained.

2d premium to John Prince, Esq. 5 dollars—not imported, but from the imported Bedford breed.

For the *Best Sows*, two in number—to John Prince, Esq. 10 dollars. These also were imported and were admirable specimens.

For the *Best Pigs*, not less than four nor more than eight months old—to Isaac Jefferson, 1st premium 10 dollars—to Edward Jones, 2d do. 5 dollars.

For the *Best Imported Bull*—1st premium to Gorham Parsons, Esq. 100 dollars—2d do. to Cornelius Coolidge, Esq. 75 dollars.

It should be remarked with regard to imported Stock, that the reason we offer a higher sum is, that the first cost and expense of importation very much exceed our premiums—nor will they probably be long continued—the design being to introduce these races which have been so much improved since the emigration of our ancestors.

For the *Best Imported Milch Cow*—to Charles Tracy, Esq. 1st premium, 75 dollars.

To Cornelius Coolidge, Esq. the Trustees voted a special premium (not offered) of 30 dollars, because his Cow was imported at an early age, and not entitled on that account to any premium, but her merit was such, and his exertions so great, that she was deemed a fit subject for notice and reward. She was of the *Holderness breed*, the most distinguished for the dairy.

For the *Best Merino Ram*—1st premium to Nathaniel Ingersoll, Esq. 20 dollars—2d do. Samuel Jaques, Esq. 10 dollars.

For the *Best Merino Ewes*, five in number—1st premium to the said Mr. Jaques, 30 dollars—2nd do. to Nathaniel Ingersoll above named, 15 dollars.

All which is respectfully submitted, with one additional and important remark, tending to shew the perfect impartiality of the Trustees. Four of the committee out of five are not of that body, and are selected from a conviction of their discernment, skill and impartiality, and the only mem-



ber on the committee belonging to the board was not a competitor for any prize. It is certain that the decision was as fair as it could possibly be. For errors in *judgment* the Committee are responsible.

JOHN LOWELL, *Chairman.*

---

#### REPORT OF THE COMMITTEE ON WORKING OXEN.

THE Committee "On Working Oxen" were gratified to notice the increased competition for the premiums this year. The effect has been to display at this exhibition a fine specimen of well matched and well broken Oxen, of great strength, beauty and docility. These qualities were carefully compared and the usual trial made of their power and faculty of movement, particularly in what is termed "backing" a loaded waggon.

Sixteen yoke were entered for the premium—and after as fair and impartial consideration as the Committee were capable of, they unanimously awarded as follows:

To Spencer Boyden, of Walpole, the first premium	\$30
To William Cobb, of Roxbury, the 2d do.	25
To John Plympton, of Dover, the 3d do.	20
To E. H. Derby, of Salem, the 4th do.	15
To Moses Bailey, of Sterling,	10
To Lewis Lilly, of Oxford,	10

As there was an equality in the opinion of the Committee in the cattle exhibited by the persons last named, they by leave of the Trustees awarded the amount of the fifth premium to each of them.

The Committee would have thought Mr. Parsons entitled to a premium for his cattle (the four that ploughed) had

they have been rightly entered. But they feel it a duty to attend to precision in this respect, lest injury should arise from the precedent.

There were some cattle of great power and value, but not being perfectly trained, particularly in "backing," they were excluded from consideration. Whilst the Committee notice with pleasure the improvement in this useful stock of the country, they hope to induce a little more attention to the defect in training herein mentioned, as it has formed in the minds of the Committee hitherto an essential requisite.

By order of the Committee,

JOHN WELLES, *Chairman.*

---

REPORT OF THE COMMITTEE ON MANUFACTURES.

THE Committee on Domestic Manufactures adjudge the First Premium for superfine Broadcloths to Messrs Shepard and Jones of Northampton, \$ 30

To Mr. Asa Goodale and Co. of Millbury, the second Premium, 20

For superfine Cassimeres, the first premium to Messrs. Walcott and Groves, of Sturbridge, 15

To the Rock Bottom Company, of Marlboro', the second premium, 10

For superfine Sattinet, first premium to Messrs. Walcott and Groves, 10

To the Rock Bottom Company, the second premium, 6

For Woolen Cloth of household manufacture—To Mr. Lovett Peters, of Westboro', the first premium, 12

To Payson Williams, Esq. of Fitchburg, the second premium, 8

For Fine Kersey, of household manufacture—To Payson Williams, Esq. the first premium, 12



For Blankets—To Capt. Joseph Lovell, of East Sudbury, the second premium, 4

For Sewing Silk—To Mr. Samuel Childs, of Cambridge, the first premium, 5

For Butter—To Mr. Luke Bemis, of Watertown, the first premium, 10

To Mr. Silas Bemis, of Barre, the second premium, 5

For Cheese—To Mr. John Crehore, of Milton, the first premium, 10

To Mr. Kitridge Hill of New Braintree, the second premium, 5

For Soal Leather—To Capt. Samuel Hobbs, of Weston, the first premium, 10

To Dr. John Bartlett, of Roxbury, the second premium, 5

For Calf Skins—To Mr. Henry H. Hyde, of Framingham, the second premium.—There were four competitors besides. The specimen of one of them, the Committee thought entitled to the *first* premium. But as no name was affixed to the parcel, and no person present to inform the Committee to whom it belonged, the premium could not be awarded.

Premiums were offered for Cotton Cloths, and some kinds of Linen fabrics, but none were exhibited. The Trustees and the public, notwithstanding, have the pleasure of knowing that these branches of manufacture are prosecuted, in this Commonwealth, with a degree of success, which entitle the Manufacturers to an honorary notice from the Society, whenever its countenance is asked.

To do honor to the occasion, and unsolicited by offers of premiums, the benches of the Hall were covered with a great variety of tasteful fancy articles, and beautiful fabrics, which added much to the interest of the Exhibition, and did great honour to the ingenuity, skill and industry, of the persons who presented them.

A large mass of chrystalized *Alum* was exhibited, from a Factory in Salem—Superb Cut Glass Vases, from the Lechmere Point Factory—A Bonnet which was a good imitation of fine Leghorn Straw, manufactured from a common grass—A variety of fine thread Lace fabrics from the Watertown Factory—Fine Linen Thread, spun by a lady of Worcester—An assortment of elegant Artificial Flowers, the work of Mrs. Elizabeth Willington, of Cambridge.

And among others, a number of articles for which, being of general use, and therefore better entitled to encouragement from the Society, the Committee recommend the following gratuitous premiums:—

To Capt. Joseph Lovell, of East Sudbury, for a Cotton Counterpane, \$4

To Benjamin Wheeler and Co. of Framingham, for Straw Bonnets of a very fine quality, 5

To Mr. Johnson Mason, for do. 4

To Mr. William Wyman, of Boston, for Buckskin Gloves, 5

To Miss Sarah Hearsy, of Dorchester, for a knit Counterpane, 5

To Misses Sarah, Catherine and Hannah Lewis, of Boston, for Tippetts made of Turkey's Down, 6

To Miss Martha Lee, of Beverly, for a knit Cap, 3

To Mrs. Elizabeth Willington, of Cambridge, for Feathers of Turkey's Down, 3

To Mrs. W. Starkwell, of Worthington, for Hearth Rugs, 4

To Mrs. White, of Dedham, for a Counterpane, 4

To Miss Polly Carr of Salisbury, for White Yarn, 3

The Committee think it right to observe, that some of the Cloths of the Rock Bottom Company, of which Mr. Cranston is the agent, and some specimens of other competitors, were highly approved, and that it is very high praise to Messrs. Shepard and Jones, and to Mr. Goodale and



Company, the successful candidates, to say that theirs were better.

It is due especially to the Bellingham Woolen Factory, of which Mr. Amos Hill is the agent, to mention, that the Committee were for some time undecided between the Cloths of this Company and those which obtained the second premium.

The double milled Drab Kersey, offered by Mr. Cranstons, agent to the Rock Bottom Company, was thought, by the Committee, the best piece of cloth of the kind they had ever seen of American manufacture, they were of opinion that any so good is very rarely imported from Europe. They regretted that the limits of their authority did not permit them to award a premium for this article.

RICHARD SULLIVAN,  
ABBOTT LAWRENCE,  
JOHN LEMIST.

Brighton, Oct. 13, 1819.

---

REPORT OF THE COMMITTEE ON THE PLOUGHING  
MATCH.

The Committee on the Ploughing Match, most respectfully report:—

That the ground selected, a green sward, rendered firm from being pastured for several summers past by *fat cattle* that were awaiting the weekly fairs, was surveyed into sections of twenty rods by two, making a quarter of an acre that each team was to plough, five inches in depth. That seven competitors entered the field, and are designated in the order of the lots they drew, as follows, viz. ;—

Lot No. 1. Gorham Parsons, Esq. of Brighton; team one yoke of oxen, ploughman, Hervey Stone, no driver; finished in 55 minutes 30 seconds—33 furrows turned.

No. 2. Aaron D. Williams, of Roxbury; team two yoke of oxen, ploughman David Morrison, driver Joseph Howe; finished in 43 minutes 30 seconds—28 furrows.

No. 3. Mr. Asa Wyman, of Roxbury; team two yoke of oxen, ploughman Moses Pond, driver Asa Wyman; finished in 42 minutes—27 furrows.

No. 4. Mr. Isaac Cook, of Brookline; team one yoke of oxen, ploughman Isaac Cook, Jr. (a lad,) driver Daniel Philips, (a lad;) finished in 55 minutes—34 furrows.

No. 5. Hon. Josiah Quincy; team one yoke of oxen, ploughman Joseph Goodspeed, no driver; finished in one hour 49 minutes—39 furrows.

No. 6. Mr. Stedman Williams, of Roxbury; team two yoke of oxen, ploughman S. Williams, driver David Howe; finished in 38 minutes—25 furrows.

No. 7. E. Hersey Derby, Esq. of Salem; team a pair of low priced horses, ploughman Henry Burreck, no driver; finished in 65 minutes—39 furrows.

Your Committee award as follows, viz.:—

First premium to Mr. Isaac Cook,—plough \$20; ploughman, Isaac Cook, Jr. 15 years of age, \$10; driver, Daniel Phillips, 16 years of age, \$5; total \$35.

Second premium to Gorham Parsons, Esq.—plough \$12; ploughman, Hervey Stone, \$6; do. do. (no driver) \$3; total \$21.

Third premium to Hon. Josiah Quincy—plough \$8; ploughman Josiah Goodspeed, \$4; do. do. (no driver) \$2; total \$14.

Your Committee observed, that the several teams on the field were in fine order, under good command, and the ploughs of substantial and approved constructions.

They beg leave to remark, that the teams owned by Messrs. Williams and Wyman appeared to combine strength with great activity, and to have been used to constant service and good keeping—*pre-requisites* to successful farming



—and had the ploughman taken more time in the execution of their work a different result might have been expected.

Mr. Derby's plough exhibited very regular handsome work, and in reasonable time; but when your Committee took into consideration the expense of a *horse* team for *farm work*, compared with oxen, keeping in view the continual deterioration of *capital* vested in *horses*, they were impelled to a decision different from what the same performance under other circumstances, would have been entitled to. They, however, recommend a gratuity of six dollars to the ploughman, as a reward for the skill displayed by him.

In considering the performance of Mr. Quincy's plough, your Committee were constrained in some measure, by their construction of the terms on which the premiums were offered, viz. "the best work with the least expense of labour," to place *time* against *good work*, as it was unquestionably the best in the field, and the team under exemplary discipline.

They would further remark, that the several lots were nearly equal, except the one drawn by Mr. Parsons, which was encumbered with a number of fixed stones, and being part of a headland, by far the hardest ground; though your Committee had no criterion for ascertaining the difference, they acknowledge it did not afford a fair specimen of the goodness of his plough, but strong evidence was furnished of the skill of the ploughman, and the vigour and discipline of his team.

On the performance of Mr. Cook's plough, conducted by boys, your Committee offer no comment. They trust that the Members of this Society, and the Farmers in general throughout the Commonwealth, are alive to the importance of accustoming their sons, at an early age, to the use of an implement so essential to the existence of all arts; and

were this more practised, they venture to predict, there would be less complaint of hard times.

**SAMUEL WYLLYS POMEROY, *Chairman.***

Brighton, October 13, 1849.

---

**REPORT OF THE COMMITTEE ON AGRICULTURAL  
EXPERIMENTS.**

The Committee to consider the claims for premiums on Agricultural Experiments, report :—

That Payson Williams, Esq., of Fitchburg, in the County of Worcester, is entitled to the Society's premium of forty dollars, for a crop of Spring Wheat, being twenty-eight bushels and thirty quarts, raised on one acre and one eighth part of an acre of land.

That Dennis Stebbins, Esq. of Deerfield, in the County of Franklin, is entitled to the Society's premium of thirty dollars, for the best crop of Potatoes, being six hundred and twelve bushels raised on one acre of land.

That Doctor James Thacher of Plymouth, in the County of Plymouth, is entitled to the Society's premium of thirty dollars, for a crop of Ruta Baga, or Swedish Turnips, being four hundred and twenty eight bushels, raised on one acre of land.

And that Mr. Eben Thrasher of Salem, in the County of Essex, is entitled to the Society's premium of thirty dollars, for a crop of Beets, being six hundred and thirty-five bushels, raised on one acre of land.

Mr. Payson Williams of Fitchburg, exhibited proof of his having raised on one acre, and one tenth part of an acre, five hundred and thirty-five bushels of Potatoes, produced partly from the round white sort, of which he planted the



seed ends only on one half of the land ; on the remainder he used the long red, or South American Potatoe.

Stephen Williams, Esq. of Northborough, in the County of Worcester ; Mr. Nathaniel Bond of Watertown, in the County of Middlesex ; and Thomas Shepherd, Esq. of Northampton, in the County of Hampshire ; as competitors for the premium offered for the best crop of Ruta Baga. David Little, Esq., of Newbury, in the County of Essex ; and Mr. William Hutchins of Roxbury, in the County of Norfolk ; for the premium for the best crop of Carrots. Lewis Bigelow, Esq., of Petersham, in the County of Worcester, for the premium for the best crop of Potatoes. And David Little, Esq., for the premium for the best crop of Beets, caused their names to be duly entered, but did not furnish the Committee with the evidence prescribed by the Rules of the Society.

No claims for premiums were exhibited to the Committee, for introducing a Grass, superior to any now cultivated—for soiling of Cattle—for turning in green crops as a manure, and proving its utility and cheapness over any other manure, nor for proving by actual experiment, the best season and mode for laying down lands to grass, whether spring summer or fall, seeding be preferable, and with or without grain, on different soils. The enlightened farmers of Massachusetts have without doubt attended to these objects ; and the Committee would have been much gratified had they been enabled to communicate the result. Our genial summers having revisited us, it will perhaps be advisable to give some attention to Agricultural experiments, that we may be better prepared for any unpropitious change of seasons. The Committee are unwilling to close their report without noticing some experiments, made by several members of the Board of Trustees, to raise in this climate the Sweet Potatoe ; but more particularly those by the President and the Corresponding Secretary, the latter has

succeeded the two past seasons much beyond his expectations, in raising this potatoe on his grounds in Roxbury. The President caused to be exhibited at the Show in Brighton, some very fine potatoes produced on his farm in Chelsea, from cuttings of the vine brought in May last from Charleston; one of the potatoes exhibited, weighed seven pounds, and in all respects, excepting the absence, in some small degree, of the saccharine quality, they resembled the potatoe of the Carolinas.

*By order of the Committee.*

**THOMAS L. WINTHROP, Chairman.**

Boston, December 1, 1819.

---

*Fitchburg, November 12, 1819.*

[To the Trustees of the Massachusetts Agricultural Society.]

GENTLEMEN,

IN becoming a candidate for your premium on Wheat the present season, I feel a diffidence; as to me it appears almost certain, I shall (in *quantity* at least) fall far behind my more successful competitors. This consideration, however, shall not deter me from what I deem my duty.

The land on which the wheat was sown, was in 1818 planted with Potatoes (for one acre of which I obtained your premium) which after harvesting was ploughed a short time before the setting in of winter. In the spring of 1819 as soon as practicable, (after spreading on six loads of fermented manure it was again cross-ploughed—26th April sowed on the furrows two bushels of what is known by the name of the *Gilman* Wheat, (which I procured of the Hon. P. C. Brooks, of Boston,) on one acre and twenty square rods, and cross-harrowed the same, following the harrow at the same time with the clover seed, which in turn was cross-harrowed in. The wheat before sowing was washed in



water until perfectly clean, then immersed in a liquor, or lye, made in the proportion of four pints of water to every pound of wood ashes, then add one pound of unslacked lime to every bushel of seed; as recommended by M. Du Hamel, (see Massachusetts Agricultural Repository and Journal, No. 2. of Vol. 5. for 1818.) When the wheat plant was out of ground two inches, I sowed on a part of the field, Plaster of Paris, at the rate of ten bushels to the acre, which I never have been able to discover has had the least effect, (I had the like ill success in the use of a ton, on various parts of the farm.) The amount of wheat by actual measure, was twenty-eight bushels and thirty quarts. It may here not be improper to state, that on the most close examination, I could not discover *one* kernel of smutty grain in the whole crop, and had it not been for the ravages of the grasshopper in this field (in many parts of which they cut off one fourth part of the heads, which of course were lost,) there would probably have been thirty-four bushels. I esteem this kind of *wheat*, a valuable acquisition to this part of the country. The grain weighing sixty-two pounds to the bushel, and yielding at the mills in this quarter, forty-five pounds of flour, in quality equal, I think, to the best Baltimore.

PAYSON WILLIAMS, *Owner.*

AARON BIXBY, *Assistant.*

WORCESTER ss. November 16, 1819.

Personally appeared, Payson Williams, and Aaron Bixby, and made oath that the above statement by them subscribed, contains the truth and nothing but the truth,

Before me,

CALVIN WILLARD, *Justice Peace.*

*Fitchburg, September 11, 1819.*

This is to certify, that I Philip F. Cowdin, sworn surveyor of the town of Fitchburg, have this day measured a certain plot of land, which was sown with wheat, and owned by Payson Williams, of said Fitchburg, in the County of Worcester, and find it to contain one acre and twenty rods, and no more.

PHILIP F. COWDIN.

*Deerfield, October 4, 1819.*

I, John C. Hoyt, surveyor, have measured a tract of land in Deerfield, belonging to Maj. Dennis Stebbins, bounded West on the meadow road, and North East and South on land of said Stebbins, and hereby certify the same contains one acre and no more.

JOHN C. HOYT.

Franklin, ss. October 7, 1819. Then John C. Hoyt, made oath to the truth of the above certificate, before me,  
PLINY ARMS, *Justice Peace.*

*Deerfield, October 13, 1819.*

The above tract of land lies in the North Meadow in Deerfield, and is of a heavy rich loam. In the summer of 1818, there was raised upon it broom-corn, and no manure applied, and it has been appropriated for the last eight or ten years alternately, to the raising of corn and potatoes, except one year a crop of hemp. The years, in which corn was raised, there was applied about five loads of manure. May 15, 1819, the above land was planted in drills



or rows, the rows three feet apart, and the seed dropped in, about one foot asunder—there was applied twenty loads of manure, a small shovel full under each potatoe, which were cut into three pieces. The land was first ploughed and then drilled or furrowed out for the reception of the seed, with a small plough and one horse, the seed was then covered with a hoe—thirty-three bushels was the quantity of seed used, and they were a long red kind, known here by the name of *merino*. June 11th, just as the tops began to make their appearance, with a single horse there was turned two furrows on to each row, which nearly covered all the tops, and by the application of a hoe, they were completely covered. June 23d, there was turned two light furrows upon each row, for the purpose of destroying the weeds, not intending to increase the hills or ridges, and the few weeds that remained were subdued by hoeing. July 6th, the few scattering weeds that appeared were pulled up by hand. They were dug with the hoe, and finished October 13th, and the produce was six hundred and twelve bushels.

DENNIS STEBBINS.

JOHN STEWARD.

*Deerfield, October 13, 1819.*

We, John Steward and George Washburn, do certify that we assisted in digging all the potatoes on the above land, and by careful and actual admeasurement, there was six hundred and twelve bushels.

JOHN STEWARD.

GEORGE WASHBURN.

Franklin. ss. October 13, 1819. Then Dennis Stebbins, John Steward and George Washburn, made oath

to the truth of the facts contained in the certificates by them respectively signed, before me,

PLINY ARMS, *Justice Peace.*

---

[To the Trustees of the Massachusetts Agricultural Society.]

GENTLEMEN,

THE following are the circumstances relative to the acre of land cultivated with Ruta Baga, or Swedish Turnips, for which I put in my claim for a premium.

The situation of the land is such as to form a gentle declivity from the north, giving it a southern exposure. The soil is a light loam, in some parts sandy, and much disposed to suffer by drought. It is occupied by forty-nine apple trees, the most of which are of thirteen years growth. It had for several years been in grass, yielding about one ton and a half of hay annually. In 1818 it received about twenty tons of manure, and produced an ordinary crop of corn and potatoes. In April 1819, it was ploughed, and in May and June, it was twice ploughed and harrowed by a single horse, and thoroughly pulverized preparatory to seeding. From the 22d, to the 28th of June, the ruta бага seed was planted in the following manner. Deep furrows were made about four feet asunder, in which was laid a quantity of manure, two furrows were ploughed on each side which covered the manure, and the whole formed a ridge of four furrows; upon this ridge directly over the manure, the seed was immediately planted, and the earth smoothed and pressed down with a hoe. Soon after the seedlings appeared, they were thinned out to ten or twelve inches apart, and the weeds were destroyed. In July, and in August, we ploughed twice between



the rows, carrying the plough within four inches of the plants and throwing the earth into a ridge, in the intervals, after which it was ploughed back against the plants and the ridges were hand-hoed. July 27th to 29th, we transplanted about fifteen hundred plants on a part of the acre reserved for that purpose in rows without ridges, two and a half feet apart, and one foot distance in the rows, and transplanted to fill vacant places on the ridges, leaving each plant ten or twelve inches asunder throughout the whole. In the first week in September, the earth was loosened round the roots with a narrow hoe. The quantity of manure on the acre was ninety horse loads, or about thirty tons, it consisted of stable manure with sea weed, street dirt and various vegetable substances. The quantity of seed was one pound, but half a pound would have been amply sufficient. I planted some seed on the 16th July and transplanted to fill some vacant places as late as the 20th August, and these attained a tolerable size, but all that were transplanted, proved greatly inferior to those which remained on the seeded ground. The crop was harvested from the 4th to the 10th of November and being accurately measured, the amount was four hundred and twenty-eight bushels.

EXPENCES.

Thirty tons manure, . . . . .	\$45 00
Three ploughings, and harrowing . . . . .	8 00
Ploughing twice between the rows . . . . .	8 00
The whole of the labour, planting, hoeing, and trans- planting 26 days, for one man at 75 cents . . . . .	19 50
One pound of seed, . . . . .	1 50
Harvesting the crop, eleven days . . . . .	8 25
	<hr/>
	90 25
	<hr/>

By 428 bushels ruta бага at 40 cents . .	\$171 20
Ruta бага tops equal to one ton English hay .	15 00
	<hr/>
	186 20

We the subscribers certify that the foregoing is a true statement, according to the best of our knowledge, except that Henry J. Douglass does not vouch for the harvesting and measuring the crop.

**JAMES THACHER.**

**HENRY JAMES DOUGLASS, Laborer.**

**PLYMOUTH, ss.**

*November 25, 1819.*

Then personally appeared, James Thacher, and Henry James Douglass, and made oath to the truth of the foregoing statement by them subscribed, before me,

**BEZA HAYWARD, Justice Peace.**

These certify, that I have measured a piece of land containing one acre on which Dr. James Thacher obtained the above mentioned crop of ruta бага.

**ROSSETER COTTON, Surveyor.**

**PLYMOUTH, ss.**

*December 1, 1819.*

Then personally appeared, Rosseter Cotton, Esq., and made oath that on measuring the acre mentioned in the foregoing certificate by him subscribed—he discharged his duty as surveyor faithfully and impartially, before me,

**BEZA HAYWARD, Justice Peace.**

We the subscribers certify that we harvested and measured the crop of ruta бага, produced on the acre measur-



ed by Rosseter Cotton, Esq. as above, and that the whole number of bushels was four hundred and twenty-eight.

THOMAS NELSON.

JAMES COLLINGS.

PLYMOUTH, ss.

November 30, 1819.

Then personally appeared, the above named Thomas Nelson, and James Collings, and made oath that in measuring the crop of ruta бага mentioned in the foregoing certificate, by them subscribed, they performed the same, faithfully and impartially, before me,

BEZA HAYWARD, *Justice Peace.*

The ruta бага may be considered as an important acquisition to our agricultural productions, affording an excellent fresh forage for horses, cattle, sheep and swine throughout the year. Having devoted much attention to the culture, the past season, I take the liberty to recommend to the attention of farmers, who may be unacquainted with this valuable article the following particulars. 1st. Deep ploughing and plentiful manuring. 2d. Pulverizing the earth in the most effectual manner. 3d. Planting the seed and transplanting the plants as speedily as possible, after manuring and ploughing that the germs and roots may receive all the advantage of a fresh fermentation, which is a point I believe, not sufficiently appreciated by agriculturalists; another point of importance, is to roll or press down the earth after sowing, else in a dry soil the small seeds not coming in immediate contact with the earth, cannot vegetate. 4th. Deep ploughing between the rows by which the mould is exposed to the influence of the air, and those chemical changes facilitated, on which the growth of vegetables essentially depend. The result of my experiment shews decidedly, that ridging on land naturally light and dry, is inju-

rious to the crop, and that had the intervals between the rows been two and a half or three feet, instead of four feet wide, the product would have been considerably more abundant. Mr. Cobbett asserts, that the amount of the crop is always greatest when transplanted, but his position is not confirmed by my experiment. I should prefer re-seeding in vacant places, at several different periods, and the superabundant plants will be in readiness for transplanting if required. It is, nevertheless, an important consideration, that a crop of ruta бага by means of transplanting, may be obtained after taking off a crop of early potatoes, pease, oats, or any other grain harvested by the first, or even the tenth of August. It should be observed that the young plants while in the nursery should not be crowded nor shaded, and for transplanting should be large, the bulbs about the size of a man's finger. I am of opinion that ruta бага affords a more profitable crop than any other vegetable, unless carrots be an exception. Judging from the produce of the same acre the last year, and also from the contiguous land the present season, I conclude that it would not have yielded more than one hundred and fifty bushels of potatoes, and I think it may be affirmed, that land which yields forty bushels of Indian corn, will produce seven or eight hundred or more, bushels of ruta бага. When these turnips are intended for the table, those should be selected which were planted the latest and are of quicker growth. Swine may be brought to eat them in a raw state, but it is more economical to boil or steam them. It is among the peculiar excellences of ruta бага, that if preserved from frost, the roots will retain their soundness and good qualities through the year and probably much longer. Cobbett observes that they are not fully ripe, and fit for use, until February. The leaves of ruta бага are eaten voraciously by cows, but they cannot be preserved long without spoiling, and they impart somewhat of an unpleasant flavour to



the milk. My store pigs are kept in a thriving condition on the leaves without any other food.

**JAMES THACHER.**

---

I James Snow of Salem, in the County of Essex, on solemn oath declare, that I saw Ebenezer Thrasher, take off of one acre of land in Southfields, in said Salem, two hundred barrels of beets, and to the best of my knowledge and belief, fifty four barrels more, all which beets grew on the said acre of land the season past.

**JAMES SNOW.**

I Jeremiah Bean of Salem, in the County of Essex, on solemn oath declare, that I have worked for Ebenezer Thrasher, for six months last past; that to my knowledge, the said Ebenezer Thrasher, raised on one acre of land, situate in Southfields in said Salem, two hundred and fifty-four barrels of beets, the season last past—that I assisted the said Thrasher, in cultivating said land, and saw the beets packed in barrels, and counted the said barrels myself.

**JEREMIAH BEAN.**

ESSEX, ss.

October 25, 1819.

Then James Snow, and Jeremiah Bean, severally made solemn oath that the within affidavits by them severally subscribed, are true in every particular, before me,

**JOHN PUNCHARD, Justice Peace.**

I Ebenezer Thrasher of Salem, in the County of Essex, on solemn oath declare, that in the summer of 1819, I raised on one acre of land by exact measurment, two hundred and fifty-four barrels of beets—that I assisted in packing

said beets in barrels, and counted the barrels when filled. The said land is situate in Southfields, so called, in said Salem.

**EBENEZER THRASHER.**

ESSEX, ss.

October 25, 1819.

Then Ebenezer Thrasher, subscribed, and made solemn oath to the truth of the above affidavit, before me,

**JOHN PUNCHARD, Justice Peace.**

This is to certify, that the land on which I raised two hundred and fifty-four barrels of beets, in 1819, was cultivated as follows, viz. : I ploughed the land April 16th, and then spread on, seven cords of manure of different kinds, then harrowed the land over three times, April 24th.—Ploughed the land over again, and likewise harrowed it over twice, April 26th. Ploughed it over again and added four cords manure, then harrowed three times, then raked it over, then sowed five pounds of seed, the distance between the rows being two feet, and hoed through in the course of the season three times, and wed twice, and on the 19th October, begun to dig the above named, and ended on the 23d October. They were cultivated as above named, to the best of my knowledge.

**EBENEZER THRASHER.**

Salem, October 25, 1819.

I hereby certify, that the land set off by me, for Mr. Ebenezer Thrasher, on which beets were growing at the time, (October 18, 1819,) contained one acre accurate measurement.

**JAMES GALE, Surveyor.**



*Fitchburg, November 12, 1819.*

[To the Trustees of the Massachusetts Agricultural Society.]

GENTLEMEN,

PURSUANT to the object, for which one acre and fifteen square rods, as measured by P. F. Cowdin, and entered on your books for a premium, I take the liberty to state, that in 1818, said land was made use of as part of a sheep pasture. The nature of the soil is what is generally termed by farmers, warm chestnut land; excellent for grain. After blowing, digging and getting off a part of the rocks into a double wall, (which enclosed the field from the original pasture) it was ploughed early in the autumn of 1818, for the first time (probably) since its creation. Early in the spring following, it was harrowed, cross-ploughed and again harrowed; and after furrowing four feet apart one way, had the manure (unfermented and made from neat cattle and sheep) placed as near as could be judged, two feet distant. The potatoes planted, 20th and 21st May. Took of seed twenty-five bushels; one half the field planted with the seed-ends of the round whites (I am unable to call them by any other name, as the seed was brought to this place twenty years ago, from Andover, Mass.) the other part with the Rio de la Plata, or long reds, cut in the usual manner. Were hoed for the first time 14th June; second and last time 25th same month. Were harvested the last part of October, and by actual measure were, five hundred and eighty bushels on one acre of the above, and fifteen bushels on the fifteen square rods, making in all five hundred and ninety-five bushels from the field. To account for the very great inequality in the relative number of *bushels* and *rods*, of the acre and the fifteen square rods over, it will be necessary to state, that from fifteen to thirty rods of the

north part of the piece, the crop was comparatively light with the other part of the field, which was attributed by those knowing to the fact, to its being bounded on that side, by a large and thrifty growth of chestnut and other timber, whose roots, beyond a doubt, come in for a share of the earths vegetative properties. As to the odds in bushels between the red and white the former yielded ten bushels more than the latter. I, however, consider my crop of whites the most valuable.

**PAYSON WILLIAMS, Owner.**

**AARON BIXBY, Assistant.**

**WORCETER, SS.**

**November 16, 1819.**

(Personally appeared Payson Williams, and Aaron Bixby, and made oath, that the above statement, by them respectively subscribed, contains the truth, and nothing but the truth, before me,

**CALVIN WILLARD, Justice Peace.**

**Fitchburg, November 16, 1819.**

[To the Trustees of the Massachusetts Agricultural Society.]

**GENTLEMEN,**

**I** DEEM it not improper, in becoming a competitor for the premium on potatoes, to send you minutes of the expences attending the raising one acre and fifteen rods of that vegetable. It will be seen that in the relative expense and profit, in comparison with the carrot and many other roots, it would leave a considerable amount of *profit* in favour of the tap rooted vegetable; yet we should at the same time consider, that where the potatoe is generally cultivated, it would be utterly impracticable to cultivate the other



roots.\* This is case of the above mentioned plat; it being literally a bed of rocks, which after blowing and getting off the principal part into a wall and planting a crop of potatoes, the land is in an excellent state for a crop of wheat, followed by a crop of clover. The inducements for attempting to bring too such a piece of hard land (where it is so cheap as twenty dollars the acre) were, its having annually a very heavy crop of *thistles* (a sure indication of its rich and excellent qualities, for the growth of other and more valuable vegetation) together with its being but thirty rods from the house and barn. It will likewise be remembered that the enormous expense in subduing the above-mentioned land is in a great measure attributable to its being very rocky, which had an influence in retarding the work in every stage, even to the taking out the potatoes in the fall.

## EXPENSE.

Breaking up the ground, four yoke of oxen and three men one day . . . . .	\$ 7 00
Half day harrowing, oxen and man . . . . .	1 00

\* It will likewise be recollected that the culture of the potatoe (notwithstanding what Mr. Cobbett says to the contrary,) is a grand promoter of the success of the crop which is immediately to follow, particularly wheat. It will also be admitted, that this root is invariably made subservient in reclaiming rough lands. But setting aside its peculiar advantages above stated, it will be seen after giving every degree of latitude to the expense, that it is, independently, a profitable crop. The expense we here find to be seventy-five dollars sixty cents, the product five hundred and ninety-five bushels, at twenty-five cents per bushel from the field in this part of the country, will be

- - - - -	\$ 148 75
Deduct for expense - - - - -	75 60

Gain from one acre and fifteen rods - - - - -	\$ 73 15
And left the land in a complete state for the ensuing year.	W.

Amount brought forward	\$ 8 00
One day cross ploughing, 2 yoke oxen, 2 men	4 00
Furrowing half day, 2 men and 1 yoke oxen	1 50
Seeded with 25 bushels potatoes at 3s. (seed ends)	12 50
Twenty buck loads unfermented manure (30 bush- els to the load)	20 00
Three men and 1 yoke oxen, 2 days planting	8 00
First hoeing four days man, and half day horse ploughing	4 50
Second hoeing the same	4 50
Fifteen days in harvesting the crop (595) at 84 cts.	12 60
	<hr/>
	\$ 75 60

*Fitchburg, September 17, 1819.*

This is to certify that I, Philip F. Cowdin, sworn surveyor of the town of Fitchburg, have this day measured a certain plot of land, planted with potatoes and owned by Payson Williams of said Fitchburg, in the County of Worcester, and find the same to contain one acre and fifteen rods, and no more.

**PHILIP F. COWDIN.**

[There being no competitors for premiums for inventions, under circumstances, which authorized the Committee on that subject to award any, none were adjudged.]

#### ON THE BAD MANAGEMENT OF ORCHARDS.

[Communicated for the Massachusetts Agricultural Repository.]

**WHY** are farmers so neglectful of their orchards? Our farms are portioned out into orchard, mowing, tillage and pasture. This is so common a division, that a plantation of



fruit trees must have been considered a useful occupation of the soil. But in what a state are the trees in most parts of the country ! Good orchards are, however, sufficiently numerous to shew that good management in this branch of husbandry is as profitable as in any other.

If some districts are well stocked with trees, others exhibit only a few, scattered along on the road side, old and in a decrepid state, the remnants of fine orchards of better days.

But, in respectable farming towns, in all parts of the Commonwealth, one may see, in the fields, apple and other fruit trees, bristled all over, from root to top, with branches like whip sticks ; hide bound, cankered and covered with moss. All the sap which, in this state of the trees, the roots can supply, is little, if any, more than enough to feed the years growth of wood. At best, the produce is but a small quantity of half grown degenerate fruit.

Many farmers think no attention necessary to young trees after planting, unless it be to keep the ground open round the roots for a year or two. The stocks are then left entirely to their own instinct of self preservation and natural tendency to grow and fructify. The innate vigor of the plant is all its dependence. Its self renovating power, its only means of recovery from injuries inflicted by insects. If a tree survives early neglect, the untamed luxuriance of its top, seems to reproach the farmer for his want of care, as its redundancy of wood, is incompatible with the production of fruit.

Bad cyder is as common as poor orchards. Whether the great consumption of ardent spirits is the cause, or the effect, of the indifferent quality of the cyder made in this State, the use of them is at least countenanced by it. Not a tavern keeper, or inn holder, thinks that the credit of his house is in any degree affected by the quality of the cyder he may offer to his guests, however poor it may be.

It is apology enough, that any better than his is rarely found in private houses. There are but two states in which this liquor is commonly seen. It is either syrup, or verjuice. A farmer's family will gorge themselves with the first for about six weeks after the cyder comes from the press, and then drink the latter all the rest of the year, unless indeed, its corrosive asperity should render a recourse to rum or brandy necessary.

Perhaps not many of the tables of our farmers, mechanics, and laborers, are regularly supplied at meals with ardent spirits, as a family beverage. But the heads of families and hired men drink but sparingly of sour cyder, knowing that such an indulgence as would satisfy their craving for liquid, would be attended with severe colic and other unpleasant effects. The complement of drink for workmen is commonly, therefore, made up with ardent spirits, taken at other times during the day. It would be going too far, to assert, that the farmers, as a class, are intemperate in the use of ardent spirits. It is, however, a subject of regret, that the practice is not more disreputable, and that young men in their full health and vigor, should so often require of their employers, an allowance of *a half a pint of spirit per day*, as a *necessary* of life. Sound cyder would invigorate more without impairing the tone of the stomach. But how few farmers have it in their power to offer the alternative. A good method of making, in the first place, and then of preserving, cyder, is so rarely practised, that farmers are themselves to blame that they are at so much expense for rum, when there can be little doubt, that their hired men and they themselves would give a preference to cyder, not sour. They have but to cherish their orchards, and to pursue *well known* methods in manufacturing and curing the liquor, to be relieved from a vexatious expense, and the still more vexatious evils of occasional, or habitual, intemperance.



Fruit is not a staff of life, but it is an innocent and refreshing luxury. Its medicinal uses give it also, no inconsiderable value. Taken in all the variety which our climate admits of, it may be made to contribute largely to health, comfort and enjoyment. As it is not a principal article for the sustenance of life, neither is it one which requires any great or constant labor to secure. Compared with bread stuffs and culinary vegetables, and considering the labor bestowed on these, it is almost a free gift of Providence. Fruit trees may be grown in fields in which grain and vegetable crops are cultivated, not only without interfering, while young, with the processes which these latter require, but so as to derive benefit from them without diminishing the ground crops. And when the trees have attained to their full size, the soil occupied by their roots, and the space shaded by their tops, if lost for tillage, will pay a greater profit from the trees, if well pruned and kept clean, than it would, employed in any other culture. The labor in keeping the trees in order, is very trifling, if bestowed seasonably. Most of what is required, should be done in the spring, before the frost leaves the ground, and other business is pressing.

It is well known that fruit trees may be cultivated with advantage in ground too rocky for tillage, without losing the use of it as pasture, provided stakes are set to keep off the cattle. The soil must, however, be kept open about the young trees, to obtain a free growth. It is, unnecessary to say that manure may be applied with advantage, and that the value of it will not be lost when so applied. The declivities on the south sides of hills, which are too steep, or too rough, for the plough, afford fine situations for fruit trees. So that on many farms, extensive orchards of various kinds of fruit may be had, without interfering with, or diminishing the amount of other crops.

The apple, pear and cherry, are certain enough as bearers to justify a reliance upon them for profit. The peach and plum are delicious fruits, and this character would seem to entitle them to a trial on every farm. They should be planted near to the buildings—the former on the south side for greater warmth, the latter on the north side for the advantage of the shade, which the plum requires.

The varieties of the several species of fruit which may be brought to perfection in this Commonwealth, are numerous, and are cultivated with success near the coast, but are little known in the interior. They are, however, common enough to furnish scions for every county, in the state. Our farmers have only to decide, that they will turn their attention to the raising of fruit, and they will have no difficulty and little or no expense in obtaining scions of the best. But it ought, at the same time, to be recollected, that as the improved and most delicious fruits have come of careful cultivation, and are derived from originals of very ordinary character, so if the trees are treated with neglect, these fruits will degenerate and in a short time be no longer cognizable as the same.

It may not be *universally* known, that by taking off a portion of the fruit from a healthy tree, at an early stage, what remains will become larger and be finer than if the whole were suffered to remain—because more sap is at liberty to be expended upon them. Keep the earth loose about the roots, and manuring produces the same effect—enlivening the roots and encouraging them to put forth more fibres, and in consequence, a greater quantity of nutrition is absorbed, of which the fruit will get its proportion.

Whatever promotes a free circulation of the sap, as cleansing the bark from scales and scraping it to make it tender and yielding, and whatever helps to perfect the maturation of the sap in the leaves of the tree, by giving them a full exposure to the sun and air, as by cutting out the



central branches when the head is too bushy, and giving it an expanded form, promotes the growth, general health, and productiveness of the tree.

It would require little time to satisfy any rational mind, that the caterpillar, the canker worm and the slug, by devouring the leaves, destroy a part of the machinery necessary to the work of vegetation and fructification. The tree must therefore decline if they are permitted to invade it, and to keep possession year after year.

A large stock of fruit trees may be raised with very little trouble by fencing in a few rods of good ground as a nursery, and sowing pomace on part, and reserving part for the seeds or stones of other fruit. There should be space enough within the enclosure to admit of transplanting the shoots the second year. The following year they will be in a state for budding or for grafting. In the mean time, the farmer may learn by a little inquiry where the buds and scions may be obtained when wanted.

This nursery will not only supply his new plantations, but afford fine thrifty trees, to take the places of such as decay in the orchard. He will thus avoid the effects of the ignorance, or deceit, of nursery men, whose trees not seldom prove not to be of the kinds, for which they are sold. This is true in many instances of trees which have been ordered from New York.

We have before adverted to the number of fruit trees which may be seen scattered over the face of the country in the more populous districts. But from the languishing state in which they are, they seem to have been thought worth merely the trouble of planting.

If, indeed, they are not worth the little additional care of pruning and cleaning, they are but cumberers of the ground. And both for appearance and use the soil had better be converted to some other purpose. For what is more unsightly than a neglected orchard! and as to profit,

one might as well keep a flock of scabby sheep, which can never come in contact with bush, or briar, or splintered rail, without leaving wool by the ounce behind them. A lean ox with a broken limb, fit neither for work, nor slaughter, is another emblem of neglected fruit trees.

The cultivation of fruit for the market is a minor object in parts remote from large towns. But in districts where good fruit would command a ready market and good price, there prevails an unaccountable inattention and indifference. On some farms, in a condition otherwise respectable, and with orchards of from one to two hundred trees, all that is obtained is about twenty barrels of cyder, a few barrels of eating apples, a bushel or two of pears, and a small quantity of the stone fruits. Again, on a few other farms with orchards of the same number of trees of equal age, the harvest yields ten times as much. Not that in the latter case the years wages paid out amount to a larger sum, or that more hands are employed.—But what hands there are, are better directed. The care of trees is considered by the proprietor an important branch of husbandry, and as such is attended to as systematically as any other branch. In truth the whole difference in the result of the year proceeds from this, that the farmer in the one case inspects his orchards carefully in the spring and puts them in order, while the farmer in the other throws away the same time in idle conversation or listless inaction, waiting for the frost to be gone and reserving all his strength for the plough.

The length of time required to bring fruit trees into a bearing state—the accidents to which they are liable—the uncertainty of the harvest—and the smallness of profit at the best,—these are thought, by many, sufficient objections to the cultivation of orchards, at least with any great degree of care.

The first objection may be answered by a direct appeal to the farmer's sense of interest. What, sir, will it cost



you to purchase and to set out your hundred young trees and to take proper care of them the first year? Will not your farm be worth the second, third, and fourth year and so on, as much more to sell, or to keep for yourself, or your children, as it will have cost you, in the mean time, to take good care of your young orchard? And when it shall have come into full bearing, at twelve or fourteen years, will you not be indemnified by the increased value of your farm, which a productive orchard will give to it? Will not your profit be fifty fold in proportion to your expense?

But, you say, your trees are liable to premature decay and to accidents? A thriving nursery, which costs little, will supply losses which care could not prevent.

Then comes the uncertainty of the harvest.—But what harvests are not uncertain? You toil and waste your strength in the corn field, and yet your harvest is uncertain. A bad fruit year comes, and a few days labor in pruning and cleansing your trees is all you can have lost.—Even this is not lost, for the quantity of fruit, even in a bad year, will more than pay you. Besides, commonly, the succeeding year is very abundant in fruit.

But there is the fourth objection—the smallness of profit. The word profit is a relative term. He, who gains ten cents on one dollar, makes a greater profit than he who gains five per cent. on one hundred dollars. Calculate what it has cost you to raise your orchard, and to make your cyder—to gather and barrel your fruit for the market, and if your cyder will bring but nine shillings the barrel and your fruit but two dollars, the absolute gain may be twenty per cent., taking the rent of the land employed into the account, although the whole amount received may not be a tenth part of the income of the farm. The probability is, however, that from a large stock of trees of various kinds of fruit, the profit may amount to a considerable sum, and thus from a very small original cost, the sales of fruit, may

come to be the principal income of a farm, in other respects in good condition.

In any part of the Commonwealth a fruit harvest from a good orchard, will pay a profit for consumption at home, if no sale can be made of it. The early *wind falls*, if not ripe enough for cyder and not used to make vinegar, will not be lost if thrown into the hog pen. The great tendency to heat in swine makes the acid of fruit grateful to the animal and useful to the carcase. If there is more fruit than the farmer can consume in his family, it will give him an opportunity to make a nicer selection for the cyder press, and thus to obtain cyder of a better quality. For in keeping the apples late, in order to mature them more perfectly before taking them to the mill, he need not be scrupulous in throwing out from the heap, for his hogs, all that are in the least decayed, as the cyder will not be so likely to have a flat taste, or be so liable to the acetous fermentation.

Besides the advantage of a wholesome and refreshing beverage which is yielded by the apple, it may, as an article of food, be made to form an agreeable and no unimportant part of the diet of a family. Other fruits in their season are entitled to the like recommendation.

It is as obvious, as striking, how much more moral, happy and prosperous our Commonwealth would be, were a general and simultaneous attention now given to the restoring of our old orchards and the planting of new ones on every farm where they are wanting! The debasing and wasteful habit of *rum drinking* would rapidly disappear with the increase of the crops, and proper exertions on the part of our Country Agricultural Societies, to diffuse the knowledge of the best methods of making and preserving cyder.

A full treatise on the subject of making and curing cyder may be found in a late number of this Repository.\*

\* Volume iv. page 170.



Also, in an earlier Number, the names and character of the best fruits of every kind cultivated in New-England.

---

## ON THE MANAGEMENT OF FRUIT TREES.

[The following directions for the management of Fruit Trees, in every stage of their growth, will be found satisfactory.—They are from MARSHALL'S RURAL ECONOMY.]

A Seed bed and nursery ground should be kept perfectly clean, and be double dug, from a foot to eighteen inches deep. The seedling plants ought to be sorted agreeably to the strength of their roots, that they may rise evenly together. In transplanting, the tap or bottom root should be taken off, and, at the same time, the longer side rootlets should be shortened. The young plants should then be set, in rows, three feet apart, and from fifteen to eighteen inches asunder in the rows; care being taken not to cramp the roots, but to bed them evenly and horizontally among the mould. In strictness of management they ought, two years previous to their being transferred to the orchard, to be retransplanted into unmanured double-dug ground, four feet every way apart, in order that the feeding fibres may be brought so near the stem, that they may be removed with it into the orchard, instead of being as they generally are left behind in the nursery. Hence in this second transplantation, as in the first, the branches of the root should not be left too long; but ought to be shortened, in such a manner, as to induce them to form a regular globular root; sufficiently small to be removed with their plant; yet sufficiently large to give it firmness and vigor in the plantation.

*If the raising or improving of varieties be the object in view, the nursery-ground should be naturally deep and*

come to be the principal income of a farm, in other respects in good condition.

In any part of the Commonwealth a fruit harvest from a good orchard, will pay a profit for consumption at home, if no sale can be made of it. The early *wind falls*, if not ripe enough for cyder and not used to make vinegar, will not be lost if thrown into the hog pen. The great tendency to heat in swine makes the acid of fruit grateful to the animal and useful to the carcase. If there is more fruit than the farmer can consume in his family, it will give him an opportunity to make a nicer selection for the cyder press, and thus to obtain cyder of a better quality. For in keeping the apples late, in order to mature them more perfectly before taking them to the mill, he need not be scrupulous in throwing out from the heap, for his hogs, all that are in the least decayed, as the cyder will not be so likely to have a flat taste, or be so liable to the acetous fermentation.

Besides the advantage of a wholesome and refreshing beverage which is yielded by the apple, it may, as an article of food, be made to form an agreeable and no unimportant part of the diet of a family. Other fruits in their season are entitled to the like recommendation.

It is as obvious, as striking, how much more moral, happy and prosperous our Commonwealth would be, were a general and simultaneous attention now given to the restoring of our old orchards and the planting of new ones on every farm where they are wanting! The debasing and wasteful habit of *rum drinking* would rapidly disappear with the increase of the crops, and proper exertions on the part of our Country Agricultural Societies, to diffuse the knowledge of the best methods of making and preserving cyder.

A full treatise on the subject of making and curing cyder may be found in a late number of this Repository.\*

\* Volume iv. page 170.



Also, in an earlier Number, the names and character of the best fruits of every kind cultivated in New-England.

---

## ON THE MANAGEMENT OF FRUIT TREES.

[The following directions for the management of Fruit Trees, in every stage of their growth, will be found satisfactory.—They are from MARSHALL'S RURAL ECONOMY.]

A Seed bed and nursery ground should be kept perfectly clean, and be double dug, from a foot to eighteen inches deep. The seedling plants ought to be sorted agreeably to the strength of their roots, that they may rise evenly together. In transplanting, the tap or bottom root should be taken off, and, at the same time, the longer side rootlets should be shortened. The young plants should then be set, in rows, three feet apart, and from fifteen to eighteen inches asunder in the rows; care being taken not to cramp the roots, but to bed them evenly and horizontally among the mould. In strictness of management they ought, two years previous to their being transferred to the orchard, to be retransplanted into unmanured double-dug ground, four feet every way apart, in order that the feeding fibres may be brought so near the stem, that they may be removed with it into the orchard, instead of being as they generally are left behind in the nursery. Hence in this second transplantation, as in the first, the branches of the root should not be left too long; but ought to be shortened, in such a manner, as to induce them to form a regular globular root; sufficiently small to be removed with their plant; yet sufficiently large to give it firmness and vigor in the plantation.

*If the raising or improving of varieties be the object in view, the nursery-ground should be naturally deep and*

*well soiled, and highly manured ; and the plants repeatedly moved at every second, third, or fourth year, that they may luxuriate not only in rich but in fresh pasturage ; thereby doing perhaps all that art can do, in this stage of improvement, toward giving freedom to the sap vessels, and size and richness to the fruit.*

The intervals may, while the plants are small, be cropped with such kitchen-garden produce as will not crowd or over-shadow the plants ; the rows being kept perfectly free from weeds.

In pruning the plants, the *leading shoot* should be particularly attended to. If it shoot double, the weaker of the contending branches should be taken off. If the leader be lost and not easily recoverable, the plant should be cut down to within a hand's breadth of the soil, and a fresh stem trained. Next to the leader, the stem boughs require attention. The undermost boughs should be taken off by degrees ; going over the plants every winter ; always cautiously preserving sufficient heads to draw up the sap ; thereby giving strength to the stems and vigor to the roots and branches : not trimming them up to naked stems as in the common practice ; thereby drawing them up prematurely tall and feeble in the lower part of the stems. The thickness of the stem ought to be in proportion to its height, a tall stock therefore requires to remain longer in the nursery than a low one.

#### BEST METHOD OF PLANTING IN THE ORCHARD.

Describe a circle about five or six feet diameter for the hole. If the ground be in grass, remove the sward in shallow spits, placing the sods on one side of the hole. The best of the loose mould placed by itself on another side ; and the dead earth, from the bottom of the hole, in a third heap.



The depth of the holes should be regulated by the nature of the sub-soil. Where this is cold and retentive, the holes should not be made much deeper than the cultivated soil. To go lower, is to form a receptacle for water, which, by standing among the roots, is very injurious to the plants. On the contrary, in a dry light soil, the holes should be made considerably deeper; as well to obtain a degree of coolness and moisture, as to be able to establish the plants firmly in the soil. In soils of a middle quality, the hole should be of such depth, that when the sods are thrown to the bottom of it, the plant will stand at the same depth in the orchard, as it did in the nursery. Each hole therefore, should be of a depth adapted to the particular root planted in it. The holes ought, however, for various reasons, to be made previous to the day of planting. If the season of planting be spring, and the ground and the weather be dry, the holes should be watered, the evening before the day of planting, by throwing two or three pailfuls of water into each; a new but eligible practice.

In planting, the sods should be thrown to the bottom of the hole, chopt with the spade, and covered with some of the finest of the mould. If the hole be so deep, that with this advantage, the bottom will not be raised high enough for the plant, some of the worst of the mould should be returned, before the sod be thrown down.

The bottom of the hole being raised to a proper height and adjusted, the lowest tire of roots are to be spread upon it; drawing them out horizontally and spreading them in different directions, drawing out with the hand the rootlets and fibres which severally belong to them; spreading them out as a feather; pressing them evenly into the soil, and covering them, by hand, with some of the finest of the mould; the other tires of roots are then to be spread out and bedded in a similar manner. Great care is to be taken to work the mould well in, by hand, that no hollowness

be left. To prevent which, the mould is to be trodden hard with the foot. The remainder of the mould should be raised into a hillock round the stem, for the triple use of affording coolness, moisture and stability to the plant. A little dish should be made on the top of the hillock, and from the rim of this, the slope should be gentle to the circumference of the hole, where the broken ground should sink some few inches below the level of the orchard. All this detail may be deemed unnecessary ; by those, I mean, who have been accustomed to bury the roots of plants in the grave digger's manner ; but I can recommend every part of it to those, who wish to ensure success, from my own practice.

Plants which have been transplanted in the manner here recommended, whose heads have been judiciously lessened, and which have been planted in the manner here described, seldom require any other stay than their own roots. If, however, the stems be tall, and the roots few and short, they should be supported in the usual manner with stakes, or, rather in the following manner, which is at once simple, strong, and most agreeable to the eye. Take a large post and slit it with a saw, and place the parts flat way, with the faces to the plant, one on each side of it, and two feet apart, and nail your rails upon the edges of the posts.

There are two ways of grafting. One is upon the stock, after two, three, or four years growth in the nursery. The manner is—to cut the entire head of the stock off and then to make a cleft in the top and insert the scions in it, covering up the whole crown afterwards with a composition. But this method is attended with this disadvantage, that should one of the grafts not take (two are usually inserted, one on each side) the cleft remains open, after the composition falls off ; and thus the cavity at the top on one side, not being filled up with new wood, becomes a receptacle for moisture and is very apt to decay.



The other method, and the best, is to let the stock remain until large enough to be grafted in the boughs, namely, until the trained boughs be about an inch in diameter.

By taking a view of the natural enemies of fruit trees, we shall be better able to judge of the art requisite to their preservation.

The enemies of fruit trees, are, a redundancy of wood; moss; spring frosts; blights; insects; an excess of fruit; old age.

Some of them are beyond human reach; but most of them are within the control of art.

A redundancy of wood is the cause of numerous evils. The roots, or rather the pasturage which supports them, is exhausted unprofitably; the bearing wood robbed of part of its sustenance, and the natural life of the tree unnecessarily shortened; while the superfluous wood, which is the cause of this mischief, places the tree in perpetual danger by giving the winds additional power over it; and is injurious to the bearing wood, by retaining the damps, and preventing a due circulation of air.

The underhanging boughs weigh down, especially when loaded with leaves, the fruit bearing branches they are preying upon, giving them a drooping habit, or at least preventing their taking, as they ought, and otherwise would, an ascending direction. While those, which grow within the head, are equally injurious in crossing and chafing the profitable branches.

The outer surface only is able to mature fruit properly. Every inward and every underling branch ought therefore to be removed. It is no uncommon sight to see two or three tiers of boughs pressing down hard, one upon another; with their twigs so intimately interwoven, that even when their leaves are off, a small bird can scarcely creep in among them. Trees thus neglected, acquire, through a want of ventilation and exercise, a runty, stunted, habit, and the fruit they bear, becomes of a crude inferior quality.

The great object of the fruit farmer is, to produce a crop every year ; and nothing is more likely to obtain it than keeping the trees in perfect health, and endeavouring to prevent their bearing beyond their strength, in a general fruit year.

Moss is chiefly, perhaps, owing to the nature of the soil, and cannot be altogether prevented ; but it may, in most cases, be checked, and its evil effects in a great measure avoided. I have seen several orchards in which the trees were almost entirely subdued by this vegetable vermin. Some of the trees, with, perhaps, only one bough left alive, and others entirely killed, and yet suffered to remain an incumbrance to the ground and a disgrace to the country. What avails the number of trees, if they are not productive ? How absurd then to spare any reasonable expense to preserve them in a state of health and productiveness ; or to suffer those to encumber the soil, which are past recovery.

Spring frosts are an enemy against which, perhaps it is most difficult to guard orchard trees. Dry frosts are observed to have no other effect than keeping the blossoms back ; consequently are frequently serviceable to fruit trees. But wet frosts, namely, frosts after rain or a foggy air, and before the trees have had time to dry, are very injurious to the buds. An instance is mentioned, in which a flying hazy shower in the evening was succeeded by a smart frost ; that side of the tree against which the haze drove, was entirely cut off ; while that side of the tree which escaped the moisture likewise escaped the effect of the frost.

Much however may depend on the strength of the blossoms. The spring of the year, 1788, had its frosts ; and all hopes of fruit trees were more than once given up ; yet for quantity or quality taken conjointly, there has perhaps, seldom been so good a fruit year. But this year, the buds formed, and the blossoms broke forth with unusual vigour, and were enabled, by their own strength, to set common enemies at defiance. On the contrary, in the succeeding



spring, the blossoms sickened in the bud, the consequence was, that scarcely an apple succeeded.

The assistance, therefore, required from art, in this case, is, by keeping the trees in a healthful vigorous state, to enable them to throw out a strength of bud and blossom; and by keeping them thin of wood, to give them an opportunity of drying quickly, before the frost sets in.

The term *blight* is of vague signification. Black blighting winds are talked of every where, but no definite idea is any where affixed to the expression. That corn and fruit become unproductive, without any visible cause, and that fruit trees are liable to be infected with insects, are certainly facts. But whether insects be the cause or the effect of blights does not appear to be yet settled.

With respect to blights, all the assistance, which art can render, is to keep the trees in a state of healthfulness, and prevent as much as possible an excess of fruit. As *old age* cannot be prevented, we have only to consider how the productiveness of trees may be protracted. I have seen healthy bearing apple trees, which now wear their second top. The first tops being worn out were cut off, and the stumps saw-grafted. Sometimes we see trees so far gone in decay, that their productiveness no longer repays their encumbrance of the soil! How injudicious in such case is the conduct of the proprietor, who permits such trees to remain year after year imbibing and wasting the substance of his soil!

ABSTRACT OF AN ESSAY "ON THE ECONOMY OF FARM-YARD MANURE." By FRANCIS BLAIR, Published in London in 1813.

#### ON FARM-YARD MANURE.

FARM-YARD Manure has been aptly termed the Farmer's Sheet-anchor. The husbanding of it is imperfectly under-

stood, or not sufficiently attended to. One error in manufacturing of Farm-yard dung, is the keeping the dung of different species of animals in separate heaps, or departments, and applying them to the land, without intermixture and in an improper state.

The dung of cattle fattening is richer than that of lean ones. Hogs are of course more active in it, and turn it over more frequently. They continue longer at work upon it, leave of consequence more of their own manure, and it becomes more intimately mixed, and is proportionally increased in value.

The dung of store cattle is often very inferior, they being generally kept poor. Pigs have therefore less inducement to turn over their litter and dung. It is neither rich nor well mixed.

Horse-dung is usually thrown out in heaps by the side of stables. It is little spread. In such heaps it soon ferments and heats to an excess. The centre of the heap is burned or charred to a dry white substance provincially called "fire fanged."

During this state it loses from 50 to 75 per cent. of its value. Against this waste the diligent and attentive farmer should guard. The remedy is easy and not expensive. It is only not allowing this dung thus to accumulate, and removing it from the stable door and spreading it about the yards where the store cattle are kept. This can be done at spare time, occasionally, in job-work.

The hog-dung ought also to be carted from feeding hogsties, and spread over the store cattle yard.

The best form of a farm-yard is a little hollowing, ("dishing" as it is called) to the centre. Here the urine and drippings of the farm-yard concentrate. If the quantity be sufficient to pay for the expense, it is an excellent method, to throw it by means of a pump into water carts, and spread it over grass land. Or, litter, scourings of ditches,



and the like may be thrown into it for the purpose of absorbing the manure and wash. This forms an excellent dressing for permanent grass land, or for young clover lays.

The farm-yard should be considered always as a preparatory process to the dung heap. Into the farm-yard every thing should be brought in the course of the summer, which is calculated to be converted into manure. In it all descriptions of dung should be brought and blended together. Horse dung, where it is to be had, should be daily carted into the farm-yard. An abundant stock of pigs should be kept in them. No dry straw should be allowed to blow about the farm. Nettles, thistles, coarse weeds, *before they seed*, should not be allowed to die and waste on road sides and in ditches, after being cut down. Cattle should be fed in the yards, always in winter, and as much as possible in summer. The yard, barn, and sheds should always be kept well littered.—Soap lees of the farm-house—saw dust—leaves of trees—road scrapings—scourings of ditches, in short, all animal and vegetable substances, should be carefully collected and thrown into the farm-yard.

#### ON FORMING DUNG HEAPS, OR PIES.

When it becomes necessary to empty the farm-yard, either from the season, or want of room, or to expedite spring work, or to employ the teams in unfavourable weather, the following steps should be pursued.

1st, Collect large heaps of clay, marl, marsh mud, pond mud, or the like, and lay, in the first place, a bottom for your manure, as broad and wide as you may deem convenient, six or eight inches thick; and next, lay a large quantity of it in rows on each side of the bottoms thus laid out.

2d, Draw the dung out of the yards and place it upon these bottoms, driving the carts upon the bottoms and successively upon the deposits, for *at this stage the dung*

ought to be compressed together, so as that all fermentation may be prevented as much as possible. In taking the dung from the farm-yard, if it have not been previously mixed in the yard, it should be so, in drawing to the heap, by taking a few loads from one yard, or from one part of a yard, and then from another alternately. For it often happens that the dung is not of the same quality, nor made with the same regularity in all parts, even of the same farm-yard. Coal ashes, road droppings, and all other collections of manure should also be carried to the dung heap in the fields.

3d, One or two men (according to the number of teams employed and distance from the yards) should remain constantly at the heaps while the teams are at work, on purpose to spread and level the dung regularly, so as to render the ascent easy for the succeeding teams as they come with their loads.

4th, When the heaps are raised as high as convenient for the cattle to draw up, several loads should be tipped up at the ends of the heaps, for the purpose of making them up to the square of the centre. The whole heaps should then be completely covered with the clay, marl, mud, or soil, previously collected, in rows, by the sides of the heaps. If a sufficient quantity of materials for this purpose have not previously been collected, more should be got ready, without loss of time, so as effectually to inclose the dung heaps in a *crust*,—whence in England they are called *pies*. The dung will be preserved in such a pie, in a perfect state, with little or no fermentation, deterioration, or diminution, and without loss by exhalation or evaporation.

5th, The Pies should remain in this state, until within ten days or a fortnight of the time the manure will be wanted, when they should be turned carefully over, and the crust, top, bottom and sides intimately mixed with the dung. When the turning is completed, immediately plough several furrows of the natural soil all round the heaps, and with



the loose earth ploughed up, again coat the heaps all over; the pies will then take a gentle fermentation; the earth intermixed with and covering the dung, will absorb the juices, and gases of the dung, and the compost, come out in a state of fine preparation.

#### ON PREPARATION OF MANURE LATE IN THE SPRING.

When dung is taken out of the yards late in the spring, or only a short time before it is wanted, the preparation should, in some degree, differ from the foregoing.

The bottoms and sides of the heaps should be provided with earth, or mud as above directed, for the winter heaps, *but the dung should not, now, be carted on the heaps to compress them*; on the contrary, the dung should be thrown up lightly with a fork upon the bottoms, and the side-heaps of earth mixed intimately along with the dung, which answer the double purpose of reducing the straw part of the dung to a proper state for applying to the land, and prevents an excess of fermentation in the centre of the heaps. When the heaps are raised sufficiently high to cover the square of the bottoms prepared, the natural soil of the field should be ploughed up all round the heaps, and thrown upon them, as above directed. The pies will then take a gentle fermentation and soon be ready for use.

The time required for preparing the manure in this manner must depend upon the strength of the dung and the quantity of clay, marl, mud, or earth, thrown up along with it. Experience will soon point out the proper quantity of marl, earth, &c. to be applied and the necessary time for the pies to remain before used. Turf turned up for a year preceding, on wastes, by the sides of roads, makes excellent pie meat. Good compost heaps applied to the land have the effect of renovating soils worn out by arable culture and stimulating manures.

[Communicated for the Massachusetts Agricultural Repository,  
by A HORTICULTURIST.]

ON THE CULTURE OF GRAPE VINES.

**M**ANY Gentlemen in this neighbourhood have given considerable attention to the cultivation of Grapes in the open air upon open trellises, and some have succeeded remarkably well, although they have had to contend with the many difficulties, which that delicate and delicious fruit is subject to in this climate.

Having given some personal attention to this fruit for several years, I am satisfied that it can be raised in great perfection, and with little trouble to the cultivator, if he set out right in the first instance, and follow up the system prescribed, with attention and care.

Although most men, who have any knowledge in Horticulture, know more or less respecting the mode of cultivating this plant—yet there are many new beginners, who may collect some hints from these notes, which may aid them in the outset; and many gentlemen, who have been long in the habit of raising grapes in their gardens, may obtain some information as to the means of preserving the plants from the destructive insect which has of late years attacked the vines, and destroyed the promise of their early growth and the fair appearance of their fruit.

The best treatises on the subject of raising grape vines, recommend planting the cuttings in pots,—but in this country it is entirely unnecessary, as the plants may be easily raised in the open ground with little trouble and no expense; and if we can add to our collection of fine fruits, one, which in sickness, as well as in health, is the most refreshing and nutritive of any that we possess, with little expense and even with profit to the cultivator, we shall do a great good.



The best mode of raising the plants is by cuttings taken from the vines at the Fall pruning, and preserved in earth till spring. These may be made either of one eye or bud, or of four or five, attached to a small portion of the two years old wood, forming a cutting in the shape of a small mallet.

*The 1st year.*—They may be raised in a small nursery bed, prepared of a good light soil—set in the ground six inches distant from each other, with the rows wide enough apart to permit them to be weeded with a narrow hoe; or, they may be put in the first instance, where they are to be reared, and left to grow, at the distance of five, six, or seven feet, or more according to the wishes of the cultivator. In this latter case there should be three cuttings put into each spot six inches apart, to insure the setting of one. When this is ascertained with certainty, the two weakest may be withdrawn, leaving the best of the three to grow. If the cuttings be of one eye each, they should be from the last years growth, and a small piece of the branch an inch long should be left attached to the bud and extending half an inch on each side of it.—These should be planted two inches below the surface with the bud uppermost, and a small stake placed by the side of them that they may not be disturbed. If the cuttings are of several eyes, they should be laid in the ground sloping, leaving one eye level with, or only just above the surface. They should be kept moist, but not wet, as this will rot them. A spot which receives the morning sun till eleven o'clock, and not afterwards, is the best for a nursery bed for them, but for permanency they should be planted where they will receive the sun longest, and in this case they should be shaded at noon day until they have entirely put out. One bud only should be allowed to push from the cutting the first year; the plant should be kept free from weeds; the earth kept light around it, and as soon as the shoot has attained strength enough to produce laterals, they should be rubbed out,

and the shoot tied to a small stake, by which means it will gain firmness, and the admission of the sun and air to the shoot will prepare it to bear the frost of the Fall, and prevent its imbibing the moisture which it would otherwise be subject to, when covered with earth in the winter. By the 1st Nov. the shoots may be cut down to two eyes, and by the middle of the month, if it be dry weather, they may be covered over with earth, forming a slope to cast off the wet and prevent the rains from penetrating—as the drier the plant is kept during the winter, in the better state it will be in the succeeding spring.

*The 2d year.*—The plants should not be uncovered in this climate till the middle of April.—Those from the nursery should now be transplanted to the places where they are to remain; a shoot from each eye should be permitted to push, but as soon as you have ascertained which of the two will be the strongest and the best situated, you will preserve that, and rub out the other.—The shoot preserved you will be careful to tie up to a small stake as soon as it has length enough for this purpose, to prevent its being broken by the wind or other casualty. During the summer, the laterals from the four or five lowest buds must be rubbed out, and the shoot be carefully protected by being kept tied every eight or ten inches.

The next Fall you may cut this shoot down to two buds, (not counting the one in the crotch of the plant between the old and new wood), and cover over as before.

*The 3d year.*—You will allow shoots to push from both the eyes, and suffer them to grow, taking care of them as recommended above; but the bud in the crotch must be rubbed out. This year you must rub out the laterals from the five lowest buds, and nip in the other laterals to one eye, so that if the plant grows luxuriantly the sap may burst from the buds of the laterals, and not from those of the main branch, as it would do if the vine was dressed too



close. Be careful to keep the branches tied up that they may not be broken. In November, cut down the two branches as follows : the most feeble of the two, to two buds, to produce wood branches the succeeding season ; and the strongest, to three buds, for fruit branches, and cover them as usual.

*The 4th year.*—If you keep your vines properly dressed, you may have your first fruits without injury to your plants. After this the system to be pursued must depend on the strength of your vines, and this will depend on the goodness of the soil and the care you take of your plants. But as a general rule, the following points must be attended to.

1st, The number and length of your fruit branches must always depend on the strength of your plant ; the wood branches are always to be cut down to two eyes.

2d, No more branches should be left on the vine than it can nourish well, and abundantly ; this will depend on its age, and the soil in which it grows.

3d, The branches should be cut in alternately for wood and fruit branches, observing to cut for wood branches as low down on the plant as possible, so as to renew your wood near the bottom annually. No shoots should be permitted to grow from the old wood, unless wanted for this purpose.

4th, No more shoots should be permitted to grow than can be laid in clear, and handsome, and without confusion on the trellis, and so as to admit the sun and air freely among the branches.

5th, The laterals should be rubbed out of the wood branches six or eight eyes high, and those that are permitted to remain should be pinched into one bud. The laterals on the fruit branches should be rubbed out from the insertion of the shoot to the uppermost fruit inclusive, and the others pinched in as above. If the shoots are *very* strong, the upper laterals may be allowed to grow, to take up a greater portion of the sap ; but this should not be

done unless there is danger of the eyes bursting in the main shoots. Be careful always to keep the shoots tied up near their top.

6th, Never leave more than five good eyes on a fruit bearing branch, unless your vine is confined to a narrow space, and you are obliged to preserve only two or three fruit branches; in this case the length of the branch must correspond to the nourishment it will receive from the plant. Select the roundest and fairest branches for fruit, and the lowest and most feeble for wood. The closer the buds are together, or the shorter the joints of the branch, the better they are for fruit; these may in general be cut to three, four, or five eyes according to their strength. But in vine-ries covered with glass, where two fruit bearing branches only are left on strong vines;—twenty, thirty, and forty buds are sometimes left on fruit branches.

The foregoing rules will be sufficient for any one to build up a vineyard sufficiently large to supply himself—his friends, and the market with grapes. But to promote and forward their maturity and size, the following course may be pursued.

The first of July you will be able to see the state of your fruit, which will be just formed.—At this time select the highest fruit branches and those which have the finest appearance of fruit upon them, and perform the following operation on the two years old wood, from which these branches proceed, taking care not to cut below any of the wood branches.

Take a pruning knife with a smooth edge, and hawk's bill, and pass it round the branch where the bark is clear from knots, cutting deep enough to reach the sap wood of the plant; at a quarter or 3-8ths of an inch below the first cut make another, running parallel with the first; then make a perpendicular cut through this section of the bark the same depth, and you may take out the ring of bark clear



from the branch. This will not prevent the sap rising into the upper part of the branch, but it will prevent its descending below this cut, by which means it will be retained in, and distributed throughout the upper part of the branch, in a greater portion than it could otherwise be, and the branch and fruit will both increase in size much more than any of those that are not thus treated, and the maturity of the fruit will be advanced very much.

This has been denominated *Girdling*. If the plant is very vigorous and the season very favorable, the wound will soon be closed, so that it may be necessary to open it a second time. This process does not injure the plant, as you only girdle the fruit bearing branches, which you would in any case cut out at the Fall pruning, to make room for the branches which you have been bringing forward to give you fruit the succeeding year. This may be kept up from year to year, and give you a succession of ripe fruit from the 1st of Sept. to the close of the season. The fruit on those branches which are not girdled will ripen the latest of course, but neither these, nor those which have been girdled, should be shortened, as is customary on vines not thus treated.

By this practice, which was first suggested in the transactions of the Horticultural Society of London a few years since, and first brought into use in this country with success by the corresponding secretary of your society, I have raised grapes in the open air this year, the bunches of which weighed from eight to twenty eight ounces; and the berries measuring from two to three inches in circumference. On one vine which I planted a few years since *a cutting* in the spot where it now grows, I had seventy branches of fine chasselas, weighing from eight to eighteen ounces each.

But the grape vines have of late years been attacked by a small insect which makes its appearance first in June—

but is most abundant in August. This insect, if left to increase, destroys the vegetating principle in the leaf, and the plant languishes, the fruit mildews, and the labour and care of the cultivator is lost. Some gentlemen have abandoned their vines in consequence of the depredations of this insect, and others with great labour, and expense of time, have attempted, but in vain, to destroy them with alkalies and tobacco juice. This has to be sure operated to check them partially, but not effectually. To remedy this evil you have only to make a small light frame twelve or fourteen feet long, in the form of a soldier's tent—but with hinges of leather where the top joins so that this tent may be shut up, or opened at the bottom to any width you may require, according to the height of your trellis. This light frame, which should be made of slats of boards from one to two inches broad, may be covered with an old sail, or some cheap glazed cotton cloth which will stop the smoke, leaving cloth enough loose at each end, to close over, and prevent the smoke from escaping when the tent is spread over the trellis.

A few tobacco stalks moistened and put on some coals in a pan, will be sufficient to smoke the vines thoroughly; and as the tent is easily moved along the trellis on small wheels, one man may, in a few hours, extirpate this enemy of the vineyard. Vines that are already attacked by this insect to any great degree should be smoked in June, July, and twice in August, or oftener if you find the insect is not completely destroyed.

The insects are first seen on the under part of the leaf, without wings—very active but easily destroyed if touched. They afterwards assume the winged state, when it is very difficult to get at them, as they fly off on the vines being touched. They are yellow, striped with brown across the back. The moment the smoke ascends, the winged insects quit the leaves and fall to the ground dead or alive; the young



ones perish, but the older ones will revive if not destroyed in their torpid state. To effect this, you have only to cover the ground under the tent with a piece of wet cloth before you begin to smoke, to which they will adhere until the tent is removed, and they are revived by the atmospheric air; to prevent which you will roll, or twist, the cloth each time that you remove the smoke house, or tent, and replace it again each time before you smoke, by which means they will be effectually destroyed. This simple and cheap operation will keep your vines clear of this troublesome and destructive insect, and you may, if the season be warm, insure a good harvest; if otherwise, you will be sure, if the vines be girdled, to ripen a portion of your fruit, at least.

---

ALMS-HOUSE FARM AT SALEM.

[Communicated for the Agricultural Repository.]

THE subjoined official communication is a document, which will be of use beyond the narrow circulation of this Journal. The political economists of all civilized communities will find in it a treasure. The design of it is not to present a project to be discussed, but to give a narrative of a project crowned with success. The inference from it is—*go and do likewise*. The agriculturist may rejoice, that his favourite pursuit promises to be the means of correcting one of the most formidable evils, with which society is afflicted. Mr. Upton, who has been, from the beginning, the conductor of the Salem Alms-House Farm, is a man of singular capacity and uncommon qualifications, and the credit of what has been accomplished undoubtedly belongs to him. And we must pay him the compliment to say, that the strongest objection to the general adoption of his plan for the poor, seems to be the difficulty of finding such men

to take the management. It ought, however, to be considered, that, in the order of providence, examples like him, of great usefulness, are not lost upon the world—that merit of any kind naturally propagates itself. Neild, Bentham, Frye, and twenty other philanthropic prison-reformers are all children of the enterprising and benevolent Howard. No sooner is the world visited by a new combination of intellectual and moral qualities in any individual, than the same character is seen to develop itself in others, and to show itself in action. Mr. Upton will have the honor of having shed new light upon the interests of society, but there is capacity, disposition, and energy enough in the civilized world, to give him a multitude of successful fellow-labourers, in his great work of bettering the condition and reforming the habits of the mendicant poor. The instinct of interest, if not the power of benevolence, will be strong enough in the public, and sufficiently active in a concern so momentous, to bring into exercise all its sagacity to discover Mr. Upton's kindred spirits, whom the success of this distinguished man, and the state of society, will have created and prepared for exertion.

We have not learnt whether Mr. Upton has as yet adopted any plan for instructing the young at the Alms-House in school learning. But there is something so nearly resembling his general views in the plan pursued by Mr. Fellenberg at Berne, in Switzerland, on a farm devoted to the support and education of mendicant children, that it may be useful to transcribe an account of it, in the language of Mr. Brougham's evidence before the Education Committee of the British Parliament. We cannot but hope, that the Boston Society for the protection of Orphan Boys, as well as the Inhabitants at large of the metropolis, will have bestowed some attention on this statement, which they may have seen in other publications. We should be extremely sorry to discredit the plan of Upton or of Fellenberg, by a premature



recommendation, or by urging its adoption, where it might, from any cause, be impracticable,—but supposing the question of a proper provision for and management of the poor now open, whether for Boston, or other towns, for any part of this or any other civilized country, and we may say, with some confidence, that more aid will be derived from Fellenberg and Upton, in forming the least exceptionable plan, than from all that has been thought or done by the whole world besides.

“The branch of the establishment, however, which is more particularly deserving of attention, and with which all the others are more or less connected, is the seminary for the Poor. Mr. F. having long remarked the extreme profligacy of the lowest orders in the Swiss towns, and the habits of ignorance and vice in which their children were brought up, formed, many years ago, the design of attempting their reformation, upon principles equally sound and benevolent. His leading doctrine was, that to make those poor people better, it was necessary to make them more comfortable; and that this end would be best attained by forming, in their earliest years, habits of industry, which might contribute to their subsistence; and by joining with them a greater degree of intellectual cultivation, than has ever yet been extended to the labouring classes of the community, or been imagined to be compatible with their humble pursuits. He began his experiments upon a small number of children, which he has now increased to between thirty and forty; and this may be reckoned the utmost limit upon a farm of so moderate an extent. Those children were taken from the very worst description of society—the most degraded of the mendicant poor in Berne and other Swiss towns. With hardly any exception, they were sunk in the vicious and idle habits of their parents, a class of dissolute vagrants, resembling the worst kind of gipsies. The complete change that has been effected in them all, is one

of the most extraordinary and affecting sights that can be imagined. When I saw them, there were some who had been there for several years, and had grown up towards manhood; but the reformation in almost all took place during from one to two years, or a very little more, according as they were taken at an earlier or a more advanced age. The remark which I made, is that which immediately strikes all who visit Hofwyl;—the appearance of the children alone, their countenance and manner, impresses you with a conviction of their excellent dispositions. To describe all the steps of the process by which this reformation has been effected, would be impossible, as much depends on minute circumstances, and upon the great skill and judgment of Vehrli, a young man, who has devoted his life, under Mr. Fellenberg, to the superintendence of this part of the establishment, and to whose extraordinary virtue and ability its success is principally owing. But I shall endeavour to give the Committee some idea of the mode of treatment pursued.

“The first principle of the system is, to shew the children gentleness and kindness, so as to win their affections, and always to treat them as rational creatures, cultivating their reason, and appealing to it. It is equally essential to impress upon their minds the necessity of industrious and virtuous conduct to their happiness, and the inevitable effects of the opposite behaviour, in reducing them from the comfort in which they now live, to the state of misery from which they were rescued. A constant and even minute superintendence, at every instant of their lives, forms of course part of the system; and, as may easily be supposed, the elder boys, who have already profited by the care of the master, aid him in extending it to the new comers, who for this purpose are judiciously distributed among them. These are, I am aware, very general principles; and upon their judicious application to practice, in each particular in-



stance, according to the diversities of individual character, their whole virtue depends. But a somewhat more specific notion of the plan may be formed by observing, that it is never allowed for a moment to be absent from their thoughts, that manual labour, in cultivating the ground, is the grand and paramount care which must employ their whole lives, and upon which their very existence depends. To this every thing else is made subordinate ; but with this are judiciously connected a variety of intellectual pursuits. At their hours of relaxation, their amusements have an instructive tendency ; certain hours are set apart for the purposes of learning ; and while at work in the fields, the conversation, without interrupting for a moment the necessary business of their lives, is always directed towards those branches of knowledge, in which they are improving themselves during the intervals of labour. Beside writing and ciphering (at which they are very expert), they apply themselves to geography and history, and to the different branches of natural history, particularly mineralogy and botany, in which they take a singular delight, and are considerable proficient. The connexion of these with agriculture, renders them most appropriate studies for those poor children ; and as their daily labour brings them constantly into contact with the objects of those sciences, a double relish is thus afforded at once to the science and the labour. You may see one of them every now and then stepping aside from the furrow where several of them have been working, to deposite a specimen, or a plant, for his little hortus siccus, or cabinet ; and Mr. Fellenberg rarely goes into the field where any of them are labouring, without being called upon to decide some controversy that has arisen upon matters relating to mineralogy, or botany, or the parts of chemical science which have most immediate relation to agriculture. There is one other subject which is ever present to their minds ; I mean a pure and rational theology. Mr. F. is deeply im-

bued himself with the sense of religion ; and it enters into all his schemes for the improvement of society. Regarding the state of misery, in which the poorest classes live, as rather calculated (if I may use his own expression) to make them believe in the agency of a devil than of a God, his first care, upon rescuing those children from that wretchedness, is to inspire them with the feelings of devotion, which he himself warmly entertains, and which he regards as natural to the human heart, when misery has not chilled nor vice hardened it. Accordingly the conversation, as well as the habits of the poor at Hofwyl, partake largely of religious influence. The evidences of design observable in the operations of nature, and the benevolent tendency of those operations in the great majority of instances, form constant topics of discourse in their studies, and during the labours of the day ; and though no one has ever observed the slightest appearance of fanaticism or of superstition, against which, in truth, the course of instruction pursued is the surest safeguard), yet ample testimony is borne by all travellers to the prevailing piety of the place. One of these has noted an affecting instance of it, when the harvest once required the labourers to work for an hour or two after night-fall, and the full moon rose in extraordinary beauty over the magnificent mountains that surround the plain of Hofwyl. Suddenly, as if with one accord, the poor children began to chant a hymn which they had learnt among many others, but in which the Supreme Being is adored as having ‘lighted up the great lamp of the night, and projected it in the firmament.’” *Edin. Review*, No. LXI p. 156—158.

“The grand principle of this Institution is, that every thing must be kept subordinate to the main business of cultivating the ground ; that whatever else can be learnt by the boys is so much clear gain ; but that, before every thing, they must learn to support themselves by the labour



of their hands. Of this occupation a pleasure is made, by the agreeable course of amusement and instruction with which it is combined." *Edin. Review*, No. LXI. p. 159.

Salem, 17th Dec. 1819.

E. H. DERBY, ESQ.

DEAR SIR,

THE following statements respecting the farm connected with the Alms-House in Salem, are communicated to you by order of the overseers of the poor, in compliance with your request. They have been collected from Mr. Upton, to whose fidelity, ability, and prudence, as the manager of the house, and experience and skill, as a practical farmer, the town owe any success, which may have attended this attempt, to cause the labours of the poor in agriculture, to contribute something towards the support of an establishment, which exists for their benefit.

In the year 1815, the Work-House in Salem having been found insufficient for the accommodation of the increased number of the poor, and not well adapted for carrying into effect certain improvements in the system of management, which it was then thought expedient to adopt, the town determined to erect a more spacious building for that purpose. Upon a tract of land, called the Neck, about a quarter of a mile eastward of the compact settlement, a suitable site was prepared for the New Alms-House, and as the property of this land was in the town, the overseers of the poor were authorised to enclose a portion of it, and manage it as a farm for the benefit of the poor. This land had been cultivated by the first settlers of the town, but certainly had not been broken up for more than an hundred years, and was like the well known tract of land westward of the town, waste, uneven, and rocky.

The New Alms-House was completed in the Autumn of 1816, and the poor removed into it in the winter of the same year, during which they were employed in clearing and levelling the land, adjacent to the house ; in building wall, opening roads, and other labour necessary to render the house and grounds about it convenient for the uses of an Alms House. But no progress was made in the actual cultivation of the soil, which remained in the same state with other waste land.

In the year 1817, about eighteen acres of land were broken up, the produce of which was as follows :

Pork raised, 4391 lbs. of which 2000 lbs. sold for \$280.

Turnips 1000 bushels.

Potatoes 2700 bushels, of which 422 bushels were taken from 3010 Hills, planted in the usual manner.

All the Summer vegetables used in the house.

An account of the produce of the year 1818, has already been given with sufficient accuracy in the Journal of your Society, but to comprise all the facts relating to the subject in this paper, you may not think it amiss that it is here repeated.

This year about seventeen acres were broken up, making the tillage land about thirty-five acres.

1818.

Pork killed, weight 7960 lbs.

Twelve Live Pigs sold for \$42.

On hand 57 Pigs.

Corn 400 bushels.

Potatoes 2250 bushels.

Turnips 900 bushels.

Three tons Squashes.

Fifty tons Pumpkins.

And all the Summer vegetables necessary for the Alms-House.



In the present year, 1819, about fourteen acres more of land have been broken up and cultivated, and about the same quantity has been laid down to barley and grass; so that the acres of land actually in tillage have been nearly the same this year, as they were the last.

The produce of this year is as follows:

1819.

Pork already killed 9012 lbs.

28 Hogs to be killed this season, and will now average over 250 lbs.

A few live Pigs sold when small.

73 live Pigs on hand, to be kept over, now average over 170 lbs.

Corn raised 325 bushels. Turnips raised 250 bushels.

Barley 235 do. Pumpkins 48 tons.

Potatoes 3138 do. Squashes 22 tons.

Onions 225 do. Broom Corn sufficient to make 100 dozen of Brooms.

Beets, Carrots, Cabbages, &c. sufficient for the Winter, and all Summer vegetables in abundance.

When the farming commenced there was not a load of manure of any kind on the place. In 1818 two hundred cords of manure were made, and during the present year the quantity will be very considerably greater. The farm being situated on the sea-coast, has a great advantage over such as are inland in regard to this important material of husbandry, as great quantities of sea-weed, rock-weed, and muscle-bed, can be collected in its immediate vicinity with little trouble.

The management of the farm has been conducted on the system of husbandry commonly adapted on the farms of Massachusetts, and the tools used of no unusual construction. The stock kept on the farm consists of three yoke of working cattle, two horses, and five cows.

I know of nothing further of importance properly relating to the history, management and products of the farm. But there are some facts necessary to be stated to enable you to form a correct estimate of what may be expected from this establishment, which, though not included in the terms of your request, or essentially connected with any of the objects of your society, I beg your indulgence briefly to mention. Within the last eighteen months a wharf has been built near the Alms House by the labour of the poor supported by the town, with the occasional assistance of one, and sometimes two hired men, who during this period were employed in the service of the house and farm. This wharf covers about an acre of ground, is of an average depth of seven feet, has about twelve feet of water in front, at high tide, and is constructed in the best manner of solid granite, and gravel. The rock and gravel were taken from the town's land in the vicinity, where they are found in great abundance, and may be made a source of considerable profit to the town. This wharf is very convenient for landing the wood and other heavy articles purchased for the use of the poor, and will save the town a large bill of expense, heretofore incurred in carting from other wharves. The labour bestowed upon this wharf, which greatly exceeds the calculations made at its commencement, has not a little retarded the progress of cultivation upon the farm. The past summer, a large Piggery has also been built in the vicinity of the house, the construction and arrangement of which have been commended by experienced agriculturists, who have visited the place. Besides performing the necessary labour of the farm and completing the wharf, the teams belonging to the house have earned, since harvest of the present year, about 900 dollars, in carting gravel and rocks for individuals, and in working upon the highways. Since 1817, about a mile of excellent road has been made about the grounds, by the poor.



In addition to the labour of the farm, the inhabitants of the Alms-House are employed in spinning, weaving, coopering, the manufacture of small articles of cabinet-furniture, making the wood work of all the tools used on the farm, corn brooms, &c. &c.; it being always a principal object with the overseers to give as much of an active character to the employments of the poor, as the age, strength, and general habits of the persons to be employed will admit.— The shoes worn by the tenants of the Alms-House have, from the commencement of the establishment, been made there, without the purchase of a single pair. Much of the cloth worn is manufactured there, and all the cloths are cut out and made in the house. The employment of *picking oakum*, which is a principal occupation in many Work-houses, is here restricted to those who are confined to their rooms by age and infirmity, or are otherwise actually incapable of hard labour.

How far the farm connected with our Alms-House can be depended upon to diminish the charges of the support of the poor, cannot at present be determined with sufficient accuracy. The expenses attending the commencement of such an establishment, particularly on land in so wild a state, the cost of tools, extra labour, and many others, which will readily occur to every farmer, are so considerable, that the net profits of the farming of the past and present years should by no means be taken as a fair estimate of the value of the establishment in a pecuniary view. The products of succeeding years will doubtless be more valuable and abundant, and the expenses less; so that a material reduction of the town expenses for the support of the poor may reasonably be expected from this source.

It is well known that a principal embarrassment in the management of the poor, arises from the difficulty of providing suitable employments for them; and this is especially true of those establishments, in which, as in most of

the Work-houses in Massachusetts, the Alms-House and the Bridewell are united. If our farm should be found in a great measure to remove this difficulty, by furnishing, in its various details of labour, employments suited to all classes, ages, and sexes of the poor, and rendering them more industrious, contented, healthful, and happy, than they can be made in the usual employments of such houses, then certainly the labour and expense it has required, could not have been better bestowed. When enlarged, as it may be, to embrace all the operations of husbandry, the poor may be made to depend principally on their own labour in a salutary and honourable occupation for their support.— Let it be once settled, that all who are admitted into this Alms-House will be required to work with constancy and diligence, and few of the idle, or dissolute will incline to become its inhabitants. Thus the common stock of labour and industry will be increased, and our institutions for the support of the poor, instead of being the means, as many political economists have supposed, of promoting indigence and idleness, will have a direct and certain tendency to suppress them.

In behalf of the Overseers of the Poor,

I am, respectfully, your most obedient servant,

J. G. KING, *Secretary of the Board,*

---

*Jamaica Plain, 17th Dec. 1819.*

[To the Corresponding Secretary of the Massachusetts Agricultural Society.]

DEAR SIR,—I was induced two years since to raise a small plat of *Mangel Wurtzel*, in consequence of having read in the 5th vol. of the Bath Society's Papers, and 3d



vol. of the Memoirs of the Philadelphia Society, such flattering accounts of its produce. The seed I procured in 1818, was from two sources, and produced two kinds, one nearly round like the turnip and yielded a very small crop—the other was long like the beet, and grew much out of the ground, and did not attain much size, and were almost as red as the common beet (probably the roots from which the seed was raised, had been planted near beets and caused a mixture.)

I was not deterred, however, from again trying it this season; and planted about one quarter of an acre, with seeds raised by myself, in 1818, from selected roots given me by a neighbour, the produce of them very much resembled the common beet, the leaves of many being a very deep red; the land was cultivated the year before with potatoes, and in April last was well ploughed and harrowed, then furrowed with a double mould board plough, 24 to 27 inches apart—and old rotten manure spread in the furrow, and the soil returned by the same plough—the top of the ridge was then flattened and the seeds drilled singly at 9 to 12 inches apart; the produce of this spot was about 120 bushels, many were marketed from them in thinning out and thought as good as young *beets*, and were double their size early in the season.—Produce near 500 bushels per acre.

Adjoining this piece, six rows (about one seventh part of an acre and with the same cultivation,) were planted with seeds of *Mangel Wurtzel*, just then received by me from Holland, the plants of the same were all handsome, leaves light coloured, and roots more than double size; on the average, produce about 110 bushels, making near 800 bushels per acre—the same care and attention was paid to both, and I attribute the whole difference to the *purity* of the seed.

This plant is not subject to injury from insects—requires very little labour after first weeding and thinning out extra plants, except what was done with the plough—three times

during the season—the leaves soon cover the ground and prevent the growth of weeds—the *outside* leaves may be frequently broken off and given to *Cows* and *Hogs*, they are very fond of them, and excellent to produce milk,—and will abundantly, I think, pay for the labour of cultivation during the Summer and leave the roots clear.

They should be planted as early as the land can be well prepared to receive the seed. I intend to increase the cultivation of them the next year, having sent to Holland for a supply of *pure seed*,—and have selected several bushels of the best raised by me this season ; to any gentleman wishing to raise the seed next year, I will give the roots with great pleasure.

I also intend to cultivate the *Ruta Baga* more largely than I have yet done, all animals are fond of and thrive upon it, the roots keep better than any other vegetable (except the potatoe,) and I do not find the milk of cows, fed with it, taste so unpleasantly, as when fed with the common turnip. Joseph Marshall in his *Agricultural Tour through Sweden, &c.* in 1770, says, *Professor Linnaeus* told him, it was not injured if left in the ground all Winter, even in that climate, when the earth was frozen three feet deep. It did not with me this year, however, yield more than half as much as Mangel Wurzel per acre.—This root deserves, however, to be extensively cultivated, its produce may generally be calculated double to the potatoe—no more labour in cultivation, and much less in harvesting the crop ; the time of sowing is after all other planting is done—and if the plants are raised, will do well to transplant on ground that has produced early pease.—This transplanting, however, should be done as soon as possible after ploughing or ridging the earth, in rows, about two and a half feet apart, and about one foot from plant to plant—having some good old manure under the furrows. I am, Dear Sir,

Respectfully yours,

JOHN PRINCE.



Brighton, 29th Dec. 1819.

## ON DAIRY STOCK.

DEAR SIR,—The deterioration of the dairy stock of our country having become apparent to many, the subject may be deemed of sufficient consequence to merit investigation. A residence of twenty-five years in the vicinity of the great *Cattle Mart* of New-England, has furnished me with opportunities of frequent observations, and also, of collecting the opinions of intelligent Drovers and Graziers, from almost every section of the country, who attend the weekly fairs; where it is estimated, forty thousand head of neat cattle, and one hundred thousand sheep are annually vended,—and the result is, a confirmation of the position—but proof of a more plenary character may be adduced; and that is the enhanced price of this species of stock, when it is considered that the causes which have heretofore operated to increase the price of working and beef cattle, could have but little effect on cows suitable for the dairy,—for when a *good Milch Cow* will sell for as much as a *good Fat Ox*, of weight, exceeding that of the Cow when fattened, which has been the case for a number of years past, it may be presumed that few are slaughtered; and it will be shewn in another place, that an ample supply of heifers are raised, did they possess the requisite *physical* properties. The question will naturally arise, and which must be familiar to those who have frequented the Brighton Fairs of late years, “what is the cause that there are so few good Milch Cows in the country?” Before we offer a theory on the subject, to shew the causes which may have produced this deterioration, we may be allowed to observe, that Cows, in their wild state, afford no more milk than is necessary to nourish the calf, with the assistance which he soon begins to derive from the herbage. And that a stock *valuable for the dairy*, is the effect of long habits of domestication, of plenty of succulent food, of com-

fortable shelter in cold climates, and of great care to prevent a mixture of other breeds. The present race of cattle can be traced, with few exceptions, to the original stock introduced by our ancestors at a very early period of our history; and it is said they came principally from Devonshire, where, at this day, is a breed celebrated in Great Britain, for beauty of form, and as valuable for the yoke; and it is probable that in the selection, properties for the dairy were not much considered—but the peculiar circumstances under which the country was settled have led to a system of management, and which has continued to the present time, by no means favourable to the increase of dairy stock. Cattle have constituted the principle staple of the new settlements, and as these extended, and the population of the old towns increased, the profit of consigning the calves to the butcher, and purchasing heifers, has been too tempting to be resisted, and the practice has increased in some sections of the country, so as to become very general. What is the system of management in the new settlements, and which may possibly be continued in some of the old? The young cattle are, with few exceptions, without any kind of shelter during the whole of our severe winters. They are foddered with poor hay, straw and husks, and suffered to browse in the woods,—and in the spring, become so feeble that they can barely crawl up the hills, to crop the honeysuckle clover, this luxuriant herbage soon restores them. They are brought from the pastures in fine condition, having obtained good size, and many of them beautiful forms, but they are to undergo another pinching winter! Better enabled, however, to struggle through the snow drifts, by an increase of bone and muscle, nature has furnished.—But this is all she can do,—neither is it necessary for her purpose, to expand the milk vessels! Can it be expected, under such a course of treatment, of the race, for nearly two centuries, but that the organs for the secretion of milk,



will become diminutive? and it is well known, that when that is the case, any excess of feeding will add very little to the quantity of milk, though it may fatten the animal,—yet it is from such a stock, that we in a great measure depend, for a supply of Milch Cows.—But another cause may be assigned, and which will be considered, perhaps, by those acquainted with the physiology of animals, as having much greater influence than people are generally aware of, and that is, in the selection of *Bulls*, most farmers confine their attention to *form and colour only*, instead of tracing their descent from a *valuable dairy stock*. It has been observed by Linnæus, that those properties of animals which relate to the *vessels*, or, in scientific terms, “the *cortical substance* or *vascular system*, are derived from the *male*,” and among other examples tending to confirm this opinion, he states, “that a cross from the male Angora Goat, with the common female Goat, produces that fine wool, or substance, called *Camel’s hair* ;\* but that the progeny from the male common Goat with the female Angora, is productive of nothing but the same worthless hair of the sire.”† Should the committee view the subject as deserving attention, they will, I trust, require from the claimants for premiums on imported stock, very particular and well authenticated evidence, of their descent from a pure dairy race.

The system of management, that has been detailed, in its consequences, extends to another object, which may be deemed of importance, and that is, the premature slaughter of vast numbers of heifers, that are turned off by the farmers as affording no promise for the dairy ; many thou-

\* Gorham Parsons, Esq. has a stock of Goats produced by the male Goat of Angora, from the female common Goat, that uniformly afford *Camel’s hair*, which is allowed by the manufacturers to be equal, if not superior, to that imported from Smyrna. Such a stock must be highly valuable in the southern and western States.

† See dissertations on the Sexes of Plants, by Linnæus.

sands of them being sold every autumn at the fairs, and if the inspection laws are not evaded, are packed and sold for beef of a very inferior quality, whereby the reputation of that staple is injured in foreign markets. To provide a remedy in some measure for this loss of capital to the state, and of profit to the farmer, would it not be expedient to offer premiums for *spayed* heifers? and also for a practical treatise on the mode of operation? The English writers on the subject, whom I have had an opportunity to consult, observe, "that there can be no doubt, but the notion of injury being done by the operation, is wholly erroneous, or without any foundation from correct observation; that the chief reason why a practice so beneficial to the interest and advantage of the farmer has been so little attended to, is the difficulty of procuring expert and proper persons to perform the operation, which is, in itself, simple;" they also observe, "that less food is required to keep or fatten them than oxen, and that the quality of the beef is fully equal." Mr. Marshall in his "*Rural Economy of Yorkshire*," remarks "that it is a fact well established in the common practice of that district, that *spayed* heifers work better and have more wind than oxen."—And I have been informed by an English farmer, who used them in the state of New-York, that they bear the heat of the climate much better than oxen,—and on the farm or road, are as active as a horse-team. Could they be substituted for horses, in those employments, what an immense saving of capital!

I remain,

Dear Sir,

With respect, very cordially yours,

S. W. POMEROY.

HON. JOSIAH QUINCY,

Chairman of the Committee on Premiums.



## ON THE MANAGEMENT OF ORCHARDS.

[To the Corresponding Secretary of the Massachusetts Agricultural Society.]

THE zeal which has of late been manifested in effecting more beneficial modes of culture of our annual crops of grain and other vegetables, the science and economy so usefully inculcated and observed in preserving, and in applying the multiplied discoveries of the means of stimulating vegetable growth and increase, as well as the spirit of improvement in the general implements of agriculture, cannot fail to advance the interests of the country, and afford a lively gratification to the agriculturalist.

There is an object of culture, however, the advantage of which, if not so immediate, or even necessary, yet adds much to the comfort, happiness, and wealth of the farmer, and may be considered his proper pride and luxury—the apple tree.

There is a moral consideration, which should induce an attention to this subject, in the opinion held by many, that cyder should supersede, and is the best substitute for spirituous liquors.

Taken as a luxury of our table, as furnishing an excellent drink, as it were the wine of our country, or as an article of export; the apple stands foremost in the fruits of New-England. It should not be forgotten, that of late, in addition to the usual markets, a very great export has taken place to Europe, and that the flavour of our apple is highly estimated there.

It may be useful to inquire what is the condition of our orchards? are they not in a state of decline? what are the causes? and how to be obviated? But most of all, it will be of great importance, if more attention can be excited to this subject, so as to encourage communications from the experience of our intelligent farmers; or if any hint should be suggested herein, by which, those disposed to add a

fruitful orchard to their farms may find aid or encouragement.

As to the state of our orchards, it is believed from a careful inquiry, that in those parts of the Commonwealth longest settled, they are on the decline. Among the causes that have induced this, besides the natural decay of old orchards, and the neglect to set out and bring on new ones, may be mentioned—the desolating canker worm, the caterpillar, and the boring worm, at the root. The blowing down of a vast number in Norfolk and Bristol, particularly in the September gale, in 1815, and the great injury done some years since, by the formation of ice upon trees, whereby they have been overburthened and broken down; all these causes have conspired to diminish the number, more than is at present apprehended.

From experience and observation, it will, it is believed, result, that even though there may be some life and vigour in those trees which were hoisted and propped up; yet they will give but little fruit, and pass into premature decay. The breaking off the great lateral roots is generally a decisive injury to the tree, besides exposing it to blow over, whenever its props become weak, insecure or displaced.

In obviating the evils which beset our trees, the modes are various, and require great labour and application. They are too often abandoned to the canker worm and caterpillar, to the total loss of fruit and foliage. Thus the tree being exhausted by putting forth its leaves twice a year in an annual recurrence, becomes exhausted, unhealthy, and is often totally destroyed.

Many preventatives to the ravages of the canker worm have been practised. The use of tar is most frequent and effectual.—But as it injures the tree by its heating and binding nature, it would be very desirable for the fertility and vigour of the orchard, if some more easy and less in-



jurious mode could be suggested. As to the caterpillar, whenever the tree is bare of leaves, and the eggs can be discovered and destroyed, which is practicable upon low and small trees, it is most effectual. A flapper is used by some, dipped in fish oil and applied to the nests, but the removal of them by hand, though slow, has, when the caterpillar is in the nest, been of necessity the prevailing practice. It is, to be sure, slow, and it is to be wished a better mode might be suggested. The injury done by the worm, which perforates and bores its way into the centre of young apple trees, threatens great injury, and one of our Trustees (Mr. Prince), has practised a mode of destroying it in the tree, by the insertion of a wire, as described in the last number of this Repository. But it is to be hoped that some application at the rim of the tree, near the root, may be found out, which may prove obnoxious to the insect which deposits the egg, and remove the apprehension and alarm excited by this last enemy. The decay and other injuries mentioned, whether natural or accidental, are such as cannot be guarded against in any considerable degree. The prudence and good management of our farmers will always effect something. If then, our orchards are on the decline from age and other circumstances, and we have been inattentive to bring forward a new growth, would it not be useful to turn our attention to this subject. The value of the fruit should induce the culture of the tree.

The situation for an orchard is well understood by our farmers, it flourishes best in a moist and strong stony soil, where it is not exposed to the wind. It cannot be attempted with success to bring forward an orchard in an old field, a green sward, or an exposed state, to be rubbed against by cattle.

It is, however, more easy than is generally supposed, to overcome many natural disadvantages, and an orchard may

be brought forward, and made productive in a few years, in a situation (when wished) not so favourable. To shew this, two cases will be mentioned which have been attended with good success.

In the one, a low piece of strong stony land was taken. As it was rather flat, it was ploughed in strips, or dug in spaces about four feet square. As it was necessary to plough a furrow between each row, the mode of ploughing in strips was found the best, as by turning the furrow towards the tree, the land was better drained. Besides raising the ground a little from the surrounding soil, half a buckload of loam was added to raise the ground on which the tree was set. After this was done, the strips or squares, as the case might be, were appropriated to the culture of potatoes and garden vegetables. In a few places only, the trees failed from the insufficiency of the drain. But by opening the drain and raising the ground, by half a buckload of loam, I found on setting out a new tree, it flourished equally with the rest. This orchard, now in eight years, is a most valuable one, and most of the trees would give half a barrel of apples.

From this and other circumstances which have fallen within my observation, it appears that low land, if strong soil and well drained, will give a fine orchard, and probably sooner than any other.

The next effort was made under totally opposite circumstances. The object was, to have an orchard on a particular spot, where the soil was thin and light upon a plain or flat. The holes were dug four feet over. The two upper strata of black and yellow loam were placed aside the tree. After this, about ten inches in depth of the gravelly or poorer earth was taken out and carted off, and a horse-cart load of stones upset into the hole; upon these, a part of the upper stratum, or some dirt from the side of the road was scattered so as to fill up the interstices, since



which the spots near the trees have been cultivated, by planting four hills of potatoes round each tree. The result has been tolerably favourable with all. But the trees having the stones placed at the roots have exceedingly outstripped the others.\*

From the result it is to be hoped, that in this easy mode, disadvantages may be counteracted, and the benefit of a deep soil had for the growth of an orchard near our dwellings, or wherever wished. As to the distance, I incline to less than is general. The best orchards I have seen have been from 25 to 30 feet distance. This is the more important, as the land if fed at all, should only be occasionally cropped a little by horses. Horned cattle, if freely admitted, will soon disappoint all expectation. It will be perceived in the difficulty of raising an orchard, an old and long improved soil is alluded to. In a new soil where the apple tree is introduced, in clearing off the forest, in this part of the country, as well as Upper Canada, they set out a tree which they often defend by upsetting a stump, so as to enclose it between roots, and they have fruit very soon indeed.

The profit of a fine orchard is familiar to our farmers.—The fact is well known in this neighbourhood, that 160 barrels of apples were gathered a few years since, from less

\* The dimensions of the Trees in the first experiment—a rich low, black, stony, soil, drained, were at the expiration of eight years 15 to 17 inches circumference, one foot from the ground. This may be considered (the tree being small when set out) as a growth of about two inches a year. The growth in the second experiment for six years, was, 12 to 14 inches in the holes, in which the stones were put one foot from the ground. Where no stones were put, 9 inches was the growth. It will thus be perceived, that the vegetation was most powerful under circumstances by nature least favourable. If then, thus much can be done to counteract such disadvantages, it surely offers much encouragement to our efforts, and leads us to hope, that not only in this, but in other objects, they may be beneficially extended.

than two acres, in the town of Dorchester. This with the cyder made from the refuse apples, and grass, gave about \$300 per acre; an income rarely exceeded in the improvement of soil. I have been minute and particular, from a wish, that others better informed, may be induced to contribute the advantages of their experience. A fine orchard is not only a source of emolument to a farmer, but one of the most beautiful and gratifying objects that can adorn a country. I am yours,

JOHN WELLES.

Dorchester, Oct. 31st, 1819.

---

**CATTLE SHOW, EXHIBITION OF MANUFACTURES, PLOUGHING MATCH, AND PUBLIC SALE OF ANIMALS AND MANUFACTURES, AT BRIGHTON---On TUESDAY and WEDNESDAY, the 17th and 18th of October, 1820.--To commence at Nine o'Clock, A. M. on each day.**

**THE Trustees of the Massachusetts Society for the promotion of Agriculture, encouraged by the patronage of the Legislature of this State, intend to offer in Premiums, not only the sum granted by the Government for that purpose, but also the whole amount of the income of their own funds. They, therefore, announce to the public, their wish to have a Cattle Show, and Exhibition of Manufactures, &c. &c., at Brighton, on Tuesday and Wednesday, the 17th and 18th of October, 1820; and they offer the following Premiums:—**

**FOR STOCK.**

For the best Bull, raised in Massachusetts, above one year old,	\$40
For the next best do. do.	25



For the best Bull Calf, from 5 to 12 months old, -	\$15
For the next best do. do. -	8
For the best Cow, not less than 3 years old, -	40
For the next best do. do. -	30
For the next best do. do. -	20
For the best Heifer, from 1 to 3 years old, with or without Calf, -	15
For the next best do. do. -	10
For the best Ox, fitted for slaughter ; regard to be had to the mode and expense of fattening, -	50
For the next best do. do. -	40
For the next best do. do. -	30
For the best pair of Working Cattle, -	30
For the next best do. do. -	25
For the next best pair do. do. -	20
For the next best do. do. -	15
For the next best do. do. -	10
For the best pair of Spayed Heifers, not less than one year old, -	25
For the best Spayed Sows, not less than four in num- ber, and not less than 5 months old, -	20
The claimant to be entitled to either of these two last premiums, must state the mode of operation and treatment, in a manner satisfactory to the Trustees.	
For the best Merino Wethers, not less than six in number, having respect to form and fleece, -	20
For the next best do. do. do. -	10
For the best native Wethers, not less than six in num- ber, do. -	10
For the best do. do. do. -	5
For the best Merino Ram, do. -	20
For the next best do. -	10
For the best Merino Ewes, not less than five in num- ber, do. -	30
For the next best do. do. do. -	15

For the best Boar, not exceeding two years old, do.	\$10
For the next best do. do. do.	5
For the best Sow, not more than four, and not less than one year old,	10
For the next best do. do. do.	5
For the best Pigs, not less than two in number, nor less than four months old, nor more than eight,	10
For the next best do. do.	5

None of the above animals will be entitled to premiums, unless they are wholly bred in the State of Massachusetts.

No animal, for which to any owner one premium shall have been awarded, shall be considered a subject for any future premium of the Society, except it be for qualities different from those for which the former premium was awarded.

Any of the above Stock, when raised, and still owned at the time of exhibition, by the person who raised them, will entitle the claimant to an allowance of ten per cent. in addition. But Sheep, to be entitled to any of the above premiums, must be raised by the person entering them.

#### FOR AGRICULTURAL EXPERIMENTS.

To the person who shall raise the greatest quantity of Wheat on an acre,	\$30
To the person who shall raise the greatest quantity of Indian Corn on an acre, not less than 70 bushels,	30
To the person who shall make the most satisfactory experiment, to ascertain the best mode of raising Indian Corn, in hills, in rows, or in ridges; not less than half an acre being employed in each mode, in the same field, the quantity and quality both of land and manure to be equal and uniform in each mode; all to receive a cultivation requisite to produce a good crop,	30



- To the person who shall raise the greatest quantity of  
Carrots on an acre, not less than 600 bushels, - \$20
- To the person who shall raise the greatest quantity of  
Potatoes on an acre, not less than 500 bushels, - 20
- To the person who shall raise the greatest quantity of  
Parsnips, on an acre, not less than 400 bushels, - 20
- To the person who shall raise the greatest quantity of  
common Beets, on an acre, not less than 600 bushels, 20
- To the person who shall raise the greatest quantity of  
Mangel Wurtzel, on an acre, not less than 600 bushels, 20
- To the person who shall raise the greatest quantity of  
Ruta Baga, on an acre, not less than 600 bushels, 20
- To the person who shall raise the greatest quantity of  
common Turnips, on an acre, not less than 600  
bushels, - - - - - 20
- To the person who shall raise the greatest quantity of  
Onions, on an acre, not less than 600 bushels, - 20
- To the person who shall raise the greatest quantity of  
Cabbages, on an acre, not less than 25 tons weight, 20
- To the person who shall introduce any Grass, not be-  
fore cultivated in this State, and prove, by actual ex-  
periment, and produce satisfactory evidence of its  
superiority to any now cultivated, - - - 30
- To the person who shall give satisfactory evidence on  
"Soiling Cattle," not less than six in number, and  
through the whole season, together with a particular  
account of the food given, and how cultivated, - 30
- To the person who shall make the experiment of turn-  
ing in green crops as a Manure, on a tract not less  
than one acre, and prove its utility and cheapness  
over any other manure, giving a particular account  
of the process, and its result, - - - 30
- To the person who shall, by actual experiment, prove  
the best season and modes of laying down lands to  
grass, whether spring, summer, or fall seeding be  
preferable, and with or without grain on different soils, 30

To entitle himself to either of the Premiums, under this head of Agricultural Experiments, the person claiming, must cultivate a tract of at least one acre in one piece, with the plant or production for which he claims a premium; and must state, in writing, under oath of the owner, and of one other person, (accompanied by a certificate of the measurement of the land, by some sworn surveyor,) the following particulars :

1. The state and quality of the land, in the spring of 1820.
2. The product and general state of cultivation and quantity of manure, employed on it the year preceding.
3. The quantity of manure used the present year.
4. The Quantity of seed used, and of Potatoes the Sort.
5. The times and manner of sowing, weeding, and harvesting the crop, and the amount of the product ascertained, by actual measurement, of the whole produce, for which a premium is claimed, and the entire expense of cultivation.

And in relation to all vegetables, except Potatoes, Onions and common Turnips, the fair average weight of at least twenty bushels must be attested; and if hay scales be in the town, in which raised, not less than three averaged cart loads must be weighed.

The claim under this head, together with evidences of the actual product, must be delivered, free of postage, to Benjamin Guild, Esq. Assistant Recording Secretary of this Society, on or before the first day of December next. The Trustees not intending to decide upon claims under the head of Agricultural Experiments, until their meeting in December.

#### FOR INVENTIONS.

To the person who shall invent the best, simplest, and least expensive Machine for Threshing Wheat, or any small Grains, mown as well as reaped, - \$75



To the person who shall use the Drill Plough, or Machine, and apply it most successively to the cultivation of any small Grains or Seeds, on a scale not less than one acre, - - - - - \$20

To the person who shall invent the best Machine, for pulverising and grinding plaster to the fineness of twenty-five bushel per ton, and which shall require no more power than a pair of Oxen or a Horse, to turn out two tons per day, and so portable that it can be removed from one farm to another without inconvenience, - - - - - 30

To the person who shall produce, at the show, any other Agricultural Implement of his own invention, which shall, in the opinion of the Trustees, deserve a reward, - - - - - 20

In all cases, proof must be given of the work done by the Machine, before it is exhibited; and of its having been used and approved by some practical farmer.

FOR FOREST TREES.

For the best Plantation of White Oak Trees, not less than one acre, nor fewer than one thousand trees per acre, to be raised from the acorn, and which trees shall be in the best thriving state on the first of September, 1823, - - - - - 100

For the best Plantations of White Ash, and of Larch Trees, each of not less than one acre, nor fewer than one thousand trees per acre, to be raised from the seeds, and which trees shall be in the best thriving state on the first of September, 1823, - - - - - 50

For the best Live Hedge, made of either the White or Cockspur Thorn, planted in 1820, not less than one hundred rods, and which shall be in the best state in 1823, - - - - - 50

## FOR DOMESTIC MANUFACTURES.

To the person or corporation who shall produce the best specimen of fine Broadcloth, not less than 1 5-8ths yards wide, exclusive of the list, 40 yards in quantity, and dyed in the wool,	\$30
For the second best do. do. do.	20
For the best superfine Cassimere, not less than 3-4 yards wide, nor less than 40 yards in quantity,	15
For the second best do. do. do.	10
For the best superfine Satinet, 3-4 yards wide, not less than 50 yards,	10
For the second best do. do. do.	6
To the person or corporation, who shall produce the best specimen of Cotton Cloth, manufactured in this State, not less than 50 pieces,	20
To the person who shall produce the best specimen of any other fabrics of Cotton, manufactured in this State, in public factories, not less than 50 pieces,	20
In private families, not less than 5 pieces,	20

## FOR HOUSEHOLD MANUFACTURES.

For the best Woollen Cloth, 3-4 wide, not less than 20 yards in quantity,	12
For the second best do. do.	8
For the best double milled Kersey, 3-4 yard wide, not less than 20 yards in quantity,	12
For the second best do. do.	8
For the best Coating, 3-4 yard wide, and not less than 20 yards in quantity,	8
For the second best do. do.	6
For the best Flannel, 7-8 yard wide, not less than 45 yards in quantity,	10
For the second best do. do.	7



For the best do. 4-4 yard wide Carpeting, not less than 30 yards in quantity,	\$15
For the second best do. do.	7
For the best 5-8 yard wide Stair Carpeting, not less than 30 yards in quantity,	10
For the second best do. do.	7
For the best pair of Blankets, not less than 8-4 wide and 10-4 long,	6
For the second best do. do.	4
For the best Woollen Knit Hose, not less than 12 pair in number,	5
For the second best do. do.	3
For the best Worsted Hose, not less than 12 pair in number,	5
For the second best do. do.	3
For the best Men's Half Hose, (woollen) not less than 12 pair in number,	4
For the second best do. do.	2
For the best Men's Woollen Gloves, not less than 12 pair in number,	5
For the second best do. do.	3
For the best Linen Diaper, 5-8 yard wide, and not less than 30 yards in quantity,	5
For the second best do. do.	3
For the best 4-4 yard Diaper, (for table linen) not less than 30 yards in quantity,	10
For the second best do. do.	5
For the best specimen of Sewing Silk, raised and spun in this State, of good fast colors, not less than one pound,	5
For the second best do. do.	3
For the best Linen Cloth, (for shirting or sheeting) one yard wide, and 25 yards long,	8
For the second best do. do.	4

For the best Butter, not less than two tubs, nor less than 50 pounds.	\$10
For the second best do. do.	5
For the best Cheese, not less in quantity than 100 lbs.	10
For the second best do. do.	5
For the best Sole Leather, not less than five sides,	10
For the second best do. do.	5
For the best dressed Calf Skins, not less than twelve in number,	10
For the second best do. do.	5
For the best ten Reams of Quarto Post Letter Paper,	10
For the best ten Reams of Foolscap Writing Paper,	10
For the best five Barrels of superfine Flour, manufactured in the State of Massachusetts, from Wheat, raised in this State,	25

All the above manufactures, except when of Cotton, must be of the growth and manufacture of the State of Massachusetts. And all Manufactures, when presented, must have a private mark, and any public or known mark must be completely concealed, so as not to be seen, or known by the Committee, nor must the Proprietors be present when they are examined; in default of either of which requisitions, the articles will not be deemed entitled to consideration or premium.

Animals, Manufactures, or Articles, may be offered for Premium at Brighton, notwithstanding they may have received a Premium from a County Agricultural Society.

It is understood, that whenever, merely from a want of competition, any of the claimants might be considered entitled to the Premium, under a literal construction, yet if, in the opinion of the Judges, the object so offered is not deserving of any reward, the Judges shall have a right to reject such claims. Persons to whom Premiums shall be awarded, may, at their option, have an article of Plate, with suitable inscriptions, in lieu of money. Premiums will be paid within ten days after they shall be awarded.



The Trustees of the Massachusetts Society for promoting Agriculture, hereby give notice, that they intend, on the second day of the Cattle Show, viz. : on the eighteenth day of October next, to give Premiums to the Owners and Ploughmen of the three Ploughs, which shall be adjudged, by a competent Committee, to have performed the *best work, with least expense of labour*, not exceeding half an acre to each Plough, and of such depth as the Committee shall direct. The team used, to be always such as is ordinarily used on his farm, for breaking up land, by the competitor, and to be an ox team.

First Plough, . . .	\$20	Second Plough, . . .	\$12
Ploughman, . . .	10	Ploughman, . . .	6
Driver, . . .	5	Driver, . . .	3
Third Plough, . . .	\$8		
Ploughman, . . .	4		
Driver, . . .	2		

In each case, if there be no Driver, both sums to be awarded to the Ploughman.

The persons engaging in the Ploughing Match, must own their respective Ploughs and Cattle; and the Ploughman, (if he be not the owner,) must be a man employed on the owner's farm.

The persons intending to contend for these Prizes, must give notice, in writing, to S. W. POMEROY, or GORHAM PARSONS, Esquires, of *Brighton*, on or before the tenth day of October, so that proper arrangements may be made for the purpose. No person will, on any consideration, be admitted without such notice. The competitors will also be considered as agreeing to follow such rules and regulations as may be adopted by the Committee, on the subject. The Ploughs to be ready to start at 9 o'clock, A. M.

The result of the last Ploughing Matches at Brighton, and the satisfaction expressed by so many of their agricultural brethren, will induce the Society to continue these

Premiums annually, in connexion with the Cattle Show ; as an efficacious means for exciting emulation and improvement in the use and construction of the *most important instrument* of Agriculture.

Persons intending to offer any species of Stock, or any Article, whatever, for Premium, are requested to give notice thereof, either by letter, (post paid) stating the Article, or to make personal application to Mr. JONATHAN WINSHIP, at *Brighton*, on or before the sixteenth day of October, and requesting him to enter such notice or application ; so that tickets may be ready at 9 o'clock of the seventeenth. No person will be considered as a competitor, who shall not have given such notice, or made such application for entry, on or before the time above specified.

The applicants will be held to a rigid compliance with this rule relative to entries, as well as to the other rules prescribed.

The examination of every species of Stock, (except Working Oxen,) and of Domestic and Household Manufactures, will take place on the seventeenth ; and the trial of Working Oxen, examination of Inventions, and Ploughing Match, on the eighteenth of October.

The Trustees also propose to appropriate, on the second day of the Cattle Show, their Pens, for the public sale of any Animals, that have been offered for Premiums, and also of any others, that are considered by them, as possessing fine qualities ; and their Halls for the public sale of Manufactures. Both sales to take place at half-past eleven o'clock, precisely. And for all Animals or Manufactures, that are intended to be sold, notice must be given to the Secretary, before ten o'clock of the eighteenth. Auctioneers will be provided by the Trustees.

*By order of the Trustees.*

JOSIAH QUINCY,

*Chairman of the Committee of Premiums.*

January, 1820.



## OFFICERS OF THE SOCIETY FOR 1820.

AARON DEXTER, M.D. *President.*SAMUEL W. POMEROY, Esq. *1st Vice-President.*THOMAS L. WINTHROP, Esq. *2d Vice-President.*JOHN PRINCE, Esq. *Treasurer.*JOHN LOWELL, Esq. *Corresponding Secretary.*HON. RICHARD SULLIVAN, *Recording Secretary.*BENJAMIN GUILD, Esq. *Assistant Recording Secretary.*

## TRUSTEES.

Hon. P. C. Brooks,

S. G. Perkins, Esq.

Hon. John Welles,

Gorham Parsons, Esq.

Hon. Josiah Quincy,

E. Hersey Derby, Esq.

## LIST OF MEMBERS, ADMITTED SINCE JULY, 1818.

Aspinwall, Augustus, Mr.

Boston.

Appleton, Samuel, Esq.

Do.

Allen, Samuel C., Esq.

Northfield.

Amory, Nathaniel, Esq.

Boston.

Alden, Cyrus, Esq.

Do.

Adams, Nathan, Mr.

Medford.

Bigelow, Timothy, Hon.

Do.

Binney, Amos, Esq.

Boston.

Bemis, Nathaniel, Mr.

Watertown.

Bemis, Luke, Esq.

Do.

Bemis, Seth, Esq.

Do.

Beal, John, Mr.

Hingham.

Bainbridge, William, Esq.

Boston.

Benjamin, Asher, Mr.

Dorchester.

Bartlett, John, Dr.

Roxbury.

Bird, George, Mr.	<i>Walpole.</i>
Bradlee, Joseph P., Mr.	<i>Boston.</i>
Baldwin, Benjamin F., Esq.	<i>Woburn.</i>
Buckminster, Lawson, Mr.	<i>Framingham.</i>
Bentley, William, Rev.	<i>Salem.</i>
Champney, John, Esq.	<i>Roxbury.</i>
Cranston, Joel, Mr.	<i>Marlborough.</i>
Cook, John, Mr.	<i>Cambridgeport</i>
Clark, Simpson, Mr.	<i>Boston.</i>
Cushing, Edmond, Esq.	<i>Lunenburg.</i>
Clap, Isaac, Mr.	<i>Dorchester.</i>
Cochran, William, Mr.	<i>Boston.</i>
Crehore, Thomas, Mr.	<i>Dorchester.</i>
Clap, Mather T., Mr.	<i>Boston.</i>
Clap, Pliny, Mr.	<i>Do.</i>
Chapman, Effingham L., Mr.	<i>Uxbridge.</i>
Crowningshield, Benjamin, Hon.	<i>Salem.</i>
Coolidge, Joseph Jr., Esq.	<i>Boston.</i>
Dwight, Henry W., Esq.	<i>Stockbridge.</i>
Downie, Samuel, Mr.	<i>Roxbury.</i>
Dorr, John, Esq.	<i>Boston.</i>
Duncan, Samuel, Mr.	<i>Haverhill.</i>
Davis, Samuel, Mr.	<i>Boston.</i>
Fayerweather, John, Esq.	<i>Westborough.</i>
Fuller, Benjamin, Esq.	<i>Dorchester.</i>
Gay, Luther, Mr.	<i>Cambridgeport.</i>
Gardner, Henry D., Mr.	<i>Dorchester.</i>
Gibbs, Alexander H., Mr.	<i>Roxbury.</i>
Gay, Willard, Esq.	<i>Dedham.</i>
Greene, Charles W., Esq.	<i>Roxbury.</i>
Gates, Silas, Mr.	<i>Marlborough.</i>
Gay, Jotham, Esq.	<i>Dedham.</i>
Heywood, Abiel, Esq.	<i>Concord.</i>
Hill, Aaron, Esq.	<i>Boston.</i>
Hale, Nathan, Esq.	<i>Do.</i>



Haskins, Ralph, Esq.  
 Howard, Edward, Mr.  
 Hammat, Wm., Major,  
 Howard, Jonathan, Mr.  
 Hale, David, Jr. Mr.  
 Hallet, George, Esq.  
 Hatch, Nymphas, Esq.  
 Jones, Samuel, Mr.  
 Jones, Oliver, Mr.  
 Jackson, Wm., Esq.  
 Jackson, Patrick T., Esq.  
 Jarvis, Deming, Mr.  
 Lincoln, Martin, Esq.  
 Lloyd, James, Hon.  
 Loring, Eliphalet, Mr.  
 Lumbard, Daniel, Mr.  
 Lovell, James, Dr.  
 Lawrence, Abbot, Mr.  
 Lee, Thomas, Esq.  
 Lemist, John, Mr.  
 M'Lellan, Isaac, Esq.  
 Munroe, Edmund, Mr.  
 Murdoch, George, Mr.  
 Munson, Israel, Esq.  
 Pickman, Benjamin, Jr. Esq.  
 Perry, John, Mr.  
 Pomeroy, Asahel, Esq.  
 Putnam, Jesse, Esq.  
 Parker, Luther, Mr.  
 Parker, Leonard M., Hon.  
 Putnam, Daniel, Esq.  
 Parker, Nathan, Deacon  
 Richardson, John, Esq.  
 Robbins, Peter G., Esq.  
 Rice, Benjamin, Esq.

Boston.  
 Oxford.  
 Scituate.  
 Boston.  
 Do.  
 Do.  
 Westford.  
 Northampton.  
 Dracut.  
 Plymouth.  
 Boston.  
 Do.  
 Hingham.  
 Boston.  
 Hingham.  
 W. Springfield.  
 Weymouth.  
 Boston.  
 Cambridge.  
 Roxbury.  
 Boston.  
 Do.  
 Do.  
 Do.  
 Salem.  
 Boston.  
 Northampton.  
 Boston.  
 Do.  
 Charlestown.  
 Lunenburg.  
 Boston.  
 Newton.  
 Roxbury.  
 Marlborough.

Russell, Nathaniel P., Esq.	<i>Boston.</i>
Shepherd, James, Mr.	<i>Northampton.</i>
Stackpole, William, Esq.	<i>Boston.</i>
Stearns, Asahel, Esq.	<i>Cambridge.</i>
Skinner, Jno., Esq.	<i>Charlestown.</i>
Shed, George, Mr.	<i>Boston.</i>
Stearns, Thomas, Esq.	<i>Lunenburg.</i>
Salisbury, Samuel Jr., Esq.	<i>Boston.</i>
Story, Joseph, Hon.	<i>Salem.</i>
Silsbee, Nathaniel, Hon.	<i>Do.</i>
Stearns, Luther, Mr.	<i>Medford.</i>
Stevens, Isaac, Mr.	<i>Boston.</i>
Swift, Benjamin, Mr.	<i>Charlestown.</i>
Tappan, Jno., Esq.	<i>Boston.</i>
Touro, Abraham, Esq.	<i>Medford.</i>
Thaxter, Levi, Esq.	<i>Watertown.</i>
Tarbell, Grosvenor, Dr.	<i>Lincoln.</i>
Tilden, Bryant P., Esq.	<i>Boston.</i>
Tileston, Wm., Mr.	<i>Do.</i>
Tenney, David, Major	<i>Sutton.</i>
Tucker, Nath., Esq.	<i>Newton.</i>
Tyler, John Stale, Mr.	<i>Boston.</i>
Tufts, Joseph, Esq.	<i>Charlestown.</i>
Tuckerman, Henry H., Esq.	<i>Boston.</i>
Valentine, John T., Esq.	<i>Do.</i>
Vose, Isaac D., Esq.	<i>Dorchester.</i>
Varnum, James, Esq.	<i>Dracut.</i>
Walker, Timothy, Mr.	<i>Charlestown.</i>
Williams, Nehemiah D., Mr.	<i>Roxbury.</i>
Wright, Edmund, Mr.	<i>Boston.</i>
White, Francis, Mr.	<i>Watertown.</i>
Wales, Thos. B., Mr.	<i>Boston.</i>
Welles, George, Mr.	<i>Do.</i>
Williams, Stephen Capt.,	<i>Roxbury.</i>
Williams, John D., Esq.	<i>Boston.</i>
Weld, Daniel, Esq.	<i>Do.</i>



Williams, Shippen, Esq.	<i>Northborough.</i>
Waterhouse, Daniel Oliver, Esq.	<i>Cambridge.</i>
White Jona., Esq.	<i>Watertown.</i>
Ward, Samuel, Esq.	<i>Roxbury.</i>
Williams, Stedman, Esq.	<i>Do.</i>
Williams, Aaron, D. Esq.	<i>Do.</i>
Wales, Eben. Esq.	<i>Dorchester.</i>

## HONORARY MEMBERS.

Bowdoin, James Temple, Esq.	<i>Boston.</i>
Botsford, William, Esq.	<i>St. John, N. B.</i>
Chipman, Ward, Jr. Esq.	<i>St. John, W. B.</i>
Dabney, John B., Esq.	<i>U. S. Consul, Azores.</i>
Dampier, John, Rev.	<i>Near Havre, France.</i>
Greene, Jno. B., Esq.	<i>Do.</i>
Gibbes Morgan, Esq.	<i>Charleston, S. C.</i>
Hammond, Abijah, Esq.	<i>New-York.</i>
King, Samuel, Jr. Esq.	<i>East-Greenwich, R. I.</i>
Moody, Stephen, Hon.	<i>Gilmantown, N. H.</i>
Phillips, William, Hon.	<i>Boston.</i>
Rogers, Moses, Esq.	<i>New-York.</i>
Young, John, Esq.	<i>Halifax.</i>

W  
S  
the  
or  
hath

Fen  
Ten  
25 c

T  
Rat  
her

Pul  
the

live  
rica

wo

PO

By  
O  
cer

Ma  
Lo

Da  
and  
ion  
cer  
Da  
and  
nes  
ge  
Dr  
rio

Pr

Le  
Pr

Ce  
A



# BOOKS

*Published by Wells and Lilly.*

## AN ESSAY ON THE CHARACTER AND PRACTICAL

Writings of ST. PAUL. By HANNAH MORE. Price 1 doll.

Saint Paul has furnished us with so rich a variety of moral and spiritual precepts, subordinate to the general laws of piety and virtue, that out of them might be well compiled a body of Ethics, or system of precepts *de officiis*, in truth and completeness far exceeding those which any philosophy hath been able to devise or deliver. *Dr. Barrow.*

**FEMALE SCRIPTURE CHARACTERS;** exemplifying Female Virtues. By the Author of the "Beneficial effects of the Christian Temper on Domestic Happiness." From the third London edition. Price \$1 25 cents bound.

This Book contains the Lives of Eve... Sarah... Rebekah... Thermusis... Pharaoh's Daughter... Ruth... Hannah... Queen of Sheba... Jezebel... Esther... Judith... Susannah... The Mother, and her seven Sons... The Virgin Mary... Elizabeth and Anne... Martha and Mary... Dorcas.

**LECTURES ON SYSTEMATIC THEOLOGY AND Pulpit Eloquence.** By the late GEORGE CAMPBELL, Author of the Translation of the Gospels. Price \$2 25.

**THE REASONABLENESS OF CHRISTIANITY,** as delivered in the Scriptures. By JOHN LOCKE, Esq. With a Preface by the American editor. Price 1 doll. sheep.

**READINGS ON POETRY.** By RICHARD LOVELL EDGEWORTH and MARIA EDGEWORTH. Price 75 cents, half bound.

**THE AIRS OF PALESTINE;** a Poem: by JOHN PIERPONT, Esq. Third edition. Revised. Price 50 cents, boards.

**ESSAYS IN RHYME, ON MORALS AND MANNERS.** By JANE TAYLOR, Author of 'Display; a Tale.' And one of the Authors of 'Original Poems for Infant Minds,' 'Hymns for Infant Minds,' &c. Price 75 cents, half bound.

**A LETTER OF ADVICE TO HIS GRANDCHILDREN,** Matthew, Gabriel, Anne, Mary, and Frances Hale. By SIR MATTHEW HALE, Lord Chief Justice in the reign of Charles II. Price 87 1-2 cents bound.

Contents.—Chapter 1. Danger of the Times in relation to Religion.—2. Dangers incident to your Age.—3. Dangers that arise to you from your Condition and Relations.—4. Dangers that may arise from your Constitution and Complexion.—5. Religion in general.—6. The Christian Religion.—7. Directions concerning Prayer.—8. Reading of the Scriptures, &c.—9. Observation of the Lord's Day.—10. Ordinary religious Conversation.—11. On the Sacrament.—12. Moral and Civil Conversations and Actions.—13. Moderation of the Passions.—14. Idleness and Employment.—15. Ordinary Employments.—16. Employment of young gentlewomen.—17. Company, and the Choice of it.—18. Recreations.—Eating, Drinking, and Sleeping.—19. Apparel and Habit.—20. Carriage to your Inferiours, Superiours, and Equals.—21. Single Life and Marriage.

**BARBAULD'S LESSONS FOR CHILDREN;** in four parts. Price 25 cents a part.

**HYMNS IN PROSE FOR CHILDREN.** By the Author of Lessons for Children. From the seventeenth London edition, much enlarged. Price 25 cents.

**EPISTLES ON WOMEN,** exemplifying their Character and Condition in various ages and nations. With Miscellaneous Poems. By Lucy Aikin. Price 87 1-2 cents boards.